

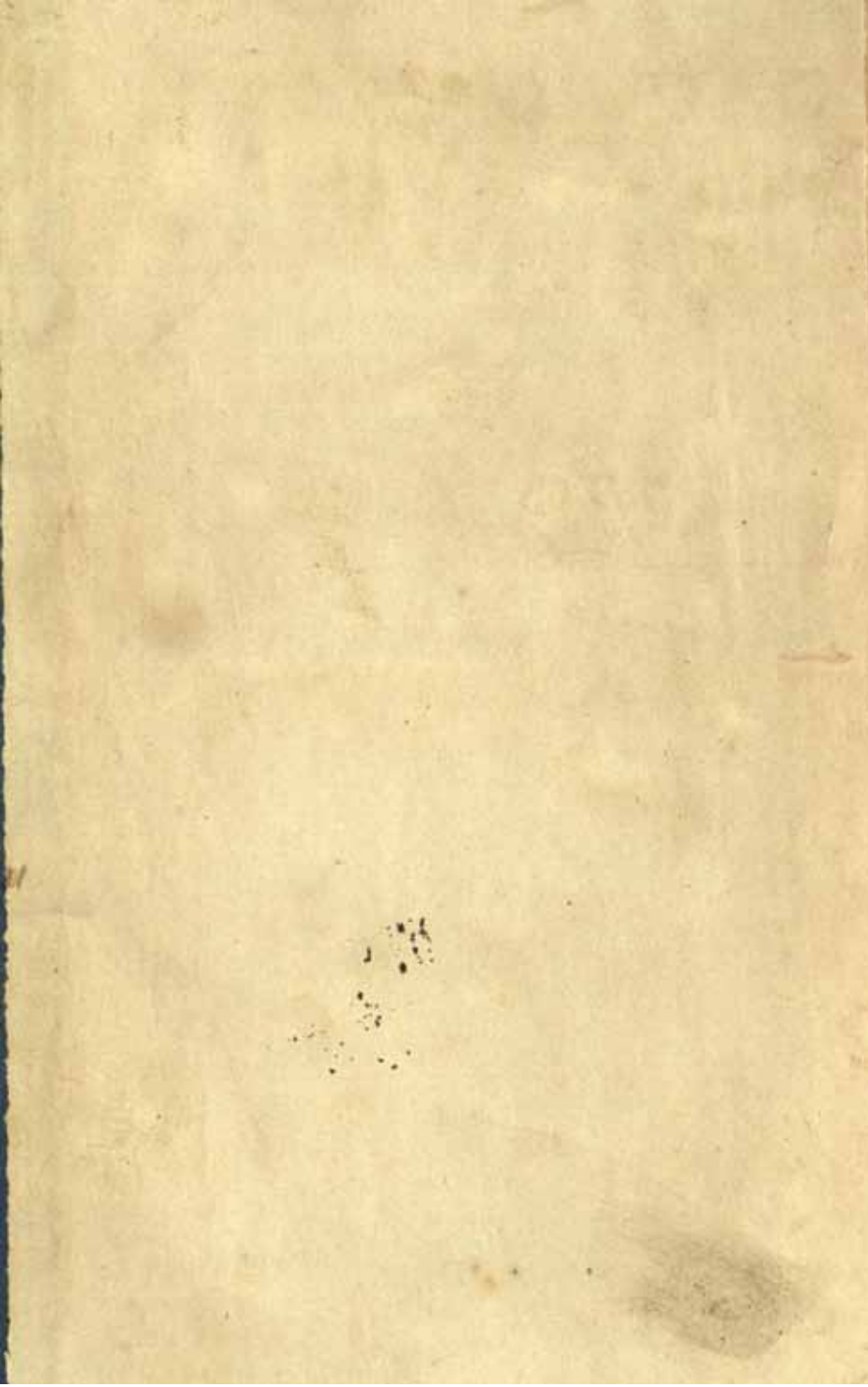
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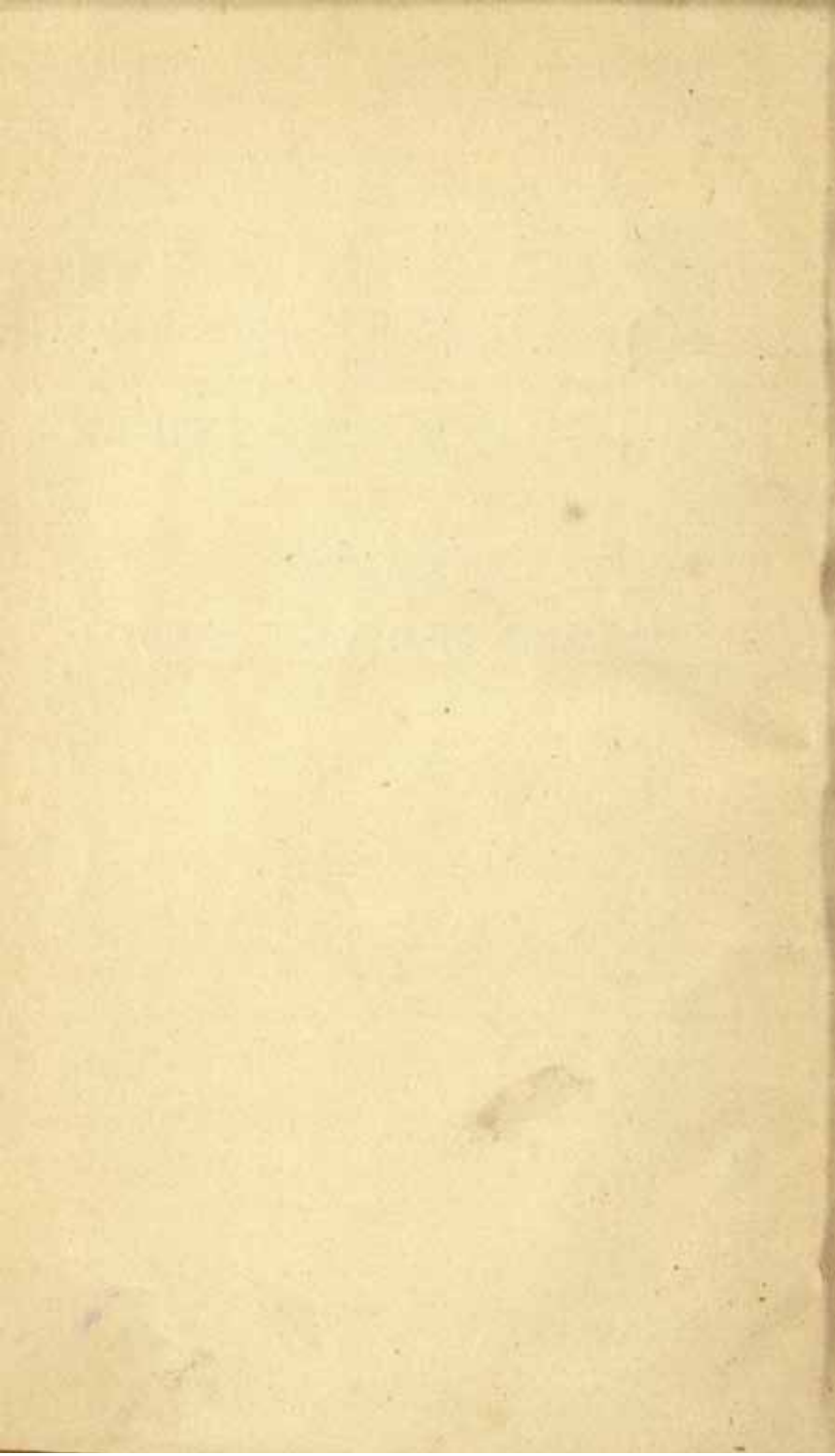
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THE
NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY



THE
NUMISMATIC CHRONICLE
AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

EDITED BY

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PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY
(separately paged).

LIST OF FELLOWS OF THE ROYAL NUMISMATIC SOCIETY
(separately paged).

ERRATA.

PAGE 319, last line, *for* Town *read* Down.

324, line 16, *for* Pl. xxiii. 5 *read* Pl. xxiii. 2.

ERRATA.

In vol. ix (1929), p 185, the coin of Syracuse, no. 4, is a decadrachm, not a didrachm.

Ibid., p. 286, footnote 2, line 2, *for* "twelve months from August, 1424", *read* "twelve months ending August, 1424".

I.

SINOPE.

[SEE PLATES I AND II.]

A HOARD of coins—chiefly of Sinope and Trapezus—found its way to Athens with refugees from the Black Sea district shortly after the war, and Messrs. Spink, into whose hands nearly all the Sinope portion fell recently, have kindly allowed me to examine it and place its contents as far as possible on record. A few other pieces had previously passed into the possession of Monsieur M. Kambanis at Athens, and by his courtesy I am able to record them also.

The coins of Trapezus, which were relatively few, appear to have been drachms and quarter drachms,¹ and their occurrence among fourth-century issues of Sinope enables us to strike out the question-mark with which Messrs. Babelon and Reinach refer them to that period. The coins of Sinope were of some interest, including several new magistrates, and a summary of them will be found on p. 13. The Museum was able to make a selection which is described in rough chronological order below. Two of Mr. Kambanis's coins, and one, not from the find, in the Ashmolean Museum, have been described among them. All the coins are in fine condition unless noted as "Good" or "Worn". The sign) at the end of

¹ *Recueil général . . . d'Asie Mineure*², p. 148, Nos. 1-3a, Pl. XV, 11-15.

an inscription (e.g. on no. 4) signifies that the inscription runs up to the edge of the coin and is not necessarily complete.

A. EARLIER SERIES.

Obv. Head of Sinope I., sometimes with earring and necklace, the hair contained in a sphendone behind and curling over the ties in front from forehead and temple; dotted circle.

Rev. Sea-eagle I., on dolphin: beneath $\Sigma\text{IN}\Omega$ (often incomplete); in field r. (α) beneath wing, or (β) beneath tail of eagle, letters (magistrate's name).

1. *Obv.* Without earring or necklace.

Rev. (β) \odot ; square incuse.

Worn \leftarrow 20.0 mm., 91.9 gr. [Pl. I.] *Recueil*, no. 18.

2. *Obv.* Without earring or necklace.

Rev. (α) $\Phi\text{I}\Lambda\odot$

\downarrow 19.0 mm., 90.6 gr. [Pl. I.]

The initial letters occur on a later coin of the "aplustre" issues (*Recueil*, no. 22), but the absence of any kind of earring or necklace² and the style of the reverses indicate an earlier date, so they can hardly refer to the same magistrate.

- 2A. *Obv.* Without earring, or necklace (?), the hair carried in a plait from the ear round the forehead, outside the sphendone.

Rev. (α) $\Phi\text{I}\Lambda\odot$

19.0 mm., 93.3 gr. Kambanis. [Pl. I.]

Monsieur Kambanis suggests to me that the plait on no. 2A is a wreath. If so the leaves point downwards instead of upwards, a disposition for which I can

² Cp. on this point *Num. Chron.*, 1920, pp. 9 seqq.

find no parallel. The plaited treatment of the hair comes very near to that on nos. 8 and 16.

3. *Obv.* Without earring or necklace.

Rev. (a) $\Delta \text{I} \text{III}$; circular incuse.

↓ 18.0 mm., 88.9 gr. [Pl. I.]

Either ΔH or ΔIO , cp. *Recueil*, nos. 18 and 20; perhaps, since ΔH seems to prefer a less bold style of lettering, the latter, who may or may not be the $\Delta \text{IO} \leq \text{K}$ of *Recueil*, no. 21.

4. *Obv.* The same die.

Rev. (a) $\Gamma \text{O} \leq$

↓ 18.5 mm., 94.8 gr. [Pl. I.]

Rust marks on the neck indicate that Pos. . . used this die after Di . . .

5. *Obv.* Single-pendant earring but no necklace.

Rev. (a) $\Gamma \text{A} \leq \text{I}$

↓ 18.5 mm., 93.2 gr. A slight cut on *obv.* down the temple. [Pl. I.]

This magistrate is the ΓA . . and probably also the $\Gamma \text{A} \leq \text{I}$ (sic) of *Recueil*, no. 20.

6. *Obv.* The same die.

Rev. (a) $\Gamma \text{O} \leq$; trace of circular incuse.

↓ 20.0 mm., 93.3 gr. [Pl. I.] *Recueil*, no. 20.

The comparative states of the common obverse die show that again its use by Posi . . . was the later.

7. *Obv.* Single-pendant earring but no necklace.

Rev. (a) $\Delta \text{AI} \leq \text{K} \text{O}$

↓ 18.5 mm., 91.3 gr. [Pl. I.]

8. *Obv.* Single-pendant earring, necklace uncertain, banded sphendone, and hair escaping in front and behind in rich curls.

Rev. (a) ΔAI)

↓ 20.5 mm., 92.2 gr. Cp. *Recueil*, no. 20. $\Delta\text{AI}\Xi\text{K}\circ$ is presumably the $\Delta\text{AI}\Xi\text{N}\circ$ (sic) of *Recueil*, no. 20. The elaborate coiffure of No. 8 is resumed again below on nos. 16-17.

9. *Obv.* Single-pendant earring and necklace, the latter visible both across the neck and beneath its truncation, broad sphendone.

Rev. (a) $\Gamma\circ\Lambda$)

↑ 19.0 mm., 92.4 gr. [Pl. I.]

10. *Obv.* Same die.

Rev. (a) AP)

↘ 20.0 mm., 92.4 gr. Chisel cut. [Pl. I.]

11. *Obv.* Without earring or necklace.

Rev. (a) APN)

↖ 18.0 mm., 91.6 gr. [Pl. I.]

Another coin from the find, with a different die, completes the reading of no. 9 as $\Gamma\circ\Lambda\text{I}$. APN seems also to be new. The obverse die of no. 9 was first used by Poli . . . , then by Diosk . . . (*Recueil*, no. 21, here Pl. I, no. 9 A), and then in a damaged state by Arn . . . I cannot parallel the extraordinary treatment of the necklace, which shows what should have been concealed on the far side of the neck, hanging beneath the truncation.

12. *Obv.* Without earring or necklace.

Rev. (a) MIKA ; trace of circular incuse.

↑ 18.5 mm., 92.9 gr. [Pl. I.] Cp. *Recueil*, no. 20.

From the same obverse die as a coin from another find (*Num. Chron.*, 1920, p. 7, no. 31) reading Pro . . . : the present coin is probably the later strike.

13. *Obv.* With single-pendant earring and necklace.

Rev. (a) AΓH

↓ 19.5 mm., 94.9 gr. [Pl. II.] Cp. *Recueil*, no. 20.

14. *Obv.* The same die, rusted.

Rev. (a) EK

↓ 19.0 mm., 92.7 gr. [Pl. II.] Cp. *Recueil*, no. 20.

The state of the common obverse die shows that no. 13 was struck before no. 14.

15. *Obv.* With circular earring and necklace.

Rev. (a) EK, (β) E

↑ 19.0 mm., 92.8 gr. [Pl. II.]

Two signatures on the reverse are exceptional, and this combination appears to be new. E is also the second name on a coin of ΜΟΙ (*Recueil*, no. 21 a), who is found elsewhere sharing an obverse die with EK (*Num. Chron.*, *ibid.*, nos. 14 and 26).

16. *Obv.* Charming style without earring or necklace, the hair escaping in front and behind in rich curls; behind ΝΙ.

Rev. (a) EK

↓ 19.0 mm., 93.4 gr. [Pl. II.]

17. *Obv.* Similar but of coarser style; behind ΝΙ.

Rev. (a) ΓΟΙ

↓ 20.5 mm., 92.7 gr. [Pl. II.]

EK is already known as a magistrate (*Recueil*, no. 20), and ΓΟΙ is presumably the ΓΟ who appears on other

coins of this time, generally with a subsidiary letter (see nos. 20, 21 below). No Greek personal name beginning with these letters is known to me. *Γοιτρόστροφος* was the Scythian name for Apollo,³ and it is possible that we have here a personal name derived from some local cult of the god.

Three coins are cited in the *Recueil* (no. 20) with NI. The first two are of earlier type, and in any case carry the letters on the reverse; the third, known only from the sale catalogue of H. P. Borrell's Collection (Sotheby's 12, vii, 1852, lot 127), shows NI on the obverse, though no mention is made of any letters on the reverse. These, however, are so faint on our no. 16 that they might well escape notice on a coin less well struck or preserved. This, and the "extreme beauty" which the catalogue attributes to the obverse of Borrell's coin, suggest that it was similar to no. 16. The elaborate coiffure, which has already been noted on No. 8 above, occurs also on a coin of ΔΗ (*Num. Chron.*, *ibid.*, no. 9). Neither of these appears to have had NI on the obverse, but mis-centring on one, and a chisel cut on the other, prevent a certain decision. The meaning of the letters is doubtful; they can hardly be a mere magistrate's signature. Though two such signatures occasionally occur on one coin it is always on the reverse. The few other coins with letters on the obverse have none on the reverse, and are generally barbarous imitations.⁴ Further, if NI were a magis-

³ Hesychius s.v. Herodotus IV. 59 gives the form *Οϊτρόστροφος*; the inscription containing this name, *C.I.G.* 6013, is now regarded as a forgery, *C.I.* XIV. 114*.

⁴ *Recueil*, No. 19a, a coin in the British Museum (*Num. Chron.*, 1920, Pl. I. 26), is there wrongly cited as having A on the obverse;

trate the size and position of the letters would imply that he was the principal and his colleagues, EK and ΓΟΙ, whose names appear on the reverses, subordinates. But EK and ΓΟΙ always appear as principals with subordinates of their own (EK/E, no. 15 above, and ΓΟ/Φ, &c., nos. 20, 21, below), and though subordinates may appear with different principals (e.g. ΜΟΙ/E and EK/E), and *vice versa*, there is no example of the same name in both ranks.

If we could complete the inscription as NIKH, describing the nymph's head as Sinope-Nike on the analogy of Terina-Nike, the personification would afford a certain parallel to the legend $\Psi\theta$ in the same unusual position on a coin of Ariarathes (*Recueil*, no. 36), which is usually interpreted "People [of Sinope]". The word NIKH, however, is so short that abbreviation seems out of place, and in any case abstract or mythological names are rarely abbreviated on Greek coins. In NI we may perhaps see the initials of one of the tyrants whom we know to have ruled Sinope from time to time.

18. *Obv.* With single-pendant earring and necklace, the hair falling in heavy locks over the cheek and from beneath the sphendone behind.

Rev. (α) ΑΓ, (β) Γ

↓ 18.0 mm., 94.1 gr. [Pl. II.]

- 18 A. *Obv.* With single-pendant earring and necklace, and decorated sphendone; three curls fastened into a knot above the forehead and a lock escaping beneath the sphendone behind (same die as no. 21).

Rev. (α) ΑΓ, (β) Γ

21.5 mm., 92.6 gr. Kambanis. [Pl. II.]

it belongs to the same issue as No. 22 below with XA on the reverse.

19. *Obv.* With single-pendant earring and necklace, one end of the sphendone brought round from beneath and tucked in above the ear.

Rev. (a) ΑΓ, (β) Γ

↓ 19.0 mm., 93.9 gr. [PL. II.]

The reading ΑΓ is certain on no. 18 A, though on nos. 18 and 19 the final letter might have been taken for a Γ. All three obverse dies are used by other magistrates: that of no. 18 later by ΔΗ (*Num. Chron.*, *ibid.*, no. 10): that of no. 18 A by ΓΟ for no less than four issues, signed respectively ΓΟ/Γ, ΓΟ/—, ΓΟ/Φ, ΓΟ/Ξ (no. 21 A, below, *Num. Chron.*, *ibid.*, nos. 5–6, and no. 21, below): that of no. 19 also by ΓΟ for three issues, ΓΟ/Γ, ΓΟ/Φ, ΓΟ/Ω (*Num. Chron.*, *ibid.*, no. 4, no. 20, below, *Num. Chron.*, *ibid.*, no. 7). Wear of the dies suggests that no. 18 A was struck after ΓΟ/Γ, ΓΟ/—, ΓΟ/Φ, but before ΓΟ/Ξ; no. 19 possibly after ΓΟ but certainly before ΓΟ/Φ, ΓΟ/Ω.

20. *Obv.* Same die as no. 19, rusted.

Rev. (a) ΓΟ, (β) Φ

↓ 18.0 mm., 94.1 gr. [PL. II.]

21. *Obv.* As no. 18 A (same die).

Rev. (a) ΓΟ, (β) Ξ

↓ 20.5 mm., 94.6 gr. [PL. II.]

In this connexion the following coin in the Ashmolean Museum, Oxford, deserves notice.

- 21 A. *Obv.* The same die (earlier use).

Rev. (a) ΓΟ, (β) Γ

↓ 18.0 mm., 88.2 gr. [PL. II.] Oxford, Ashmolean Museum. (*Recueil*, no. 26, there described as having a triple-pendant earring and reading ΓΟ/ΕΓ). For other uses of this same obverse

die by $\Gamma\circ$ and also by $A\Gamma$ see under the latter (nos. 18-19 above). $\Gamma\circ$ is perhaps the $\Gamma\circ I$ of no. 17 (*q.v.*); indeed the reverse of $\Gamma\circ/\Phi$ shows possible traces of an I on the edge of the coin, while on none of the specimens I have seen is it possible to say that there may not have been an I off the flan.

22. *Obv.* With necklace; earring (if any) concealed by loose locks of hair which also escape beneath the sphendone behind; chisel cut.

Rev. (a) XA

↘ 20.0 mm., 93.6 gr. [Pl. II.]

23. *Obv.* The same die re-cut.

Rev. (a) XA; the same die.

↘ 20.0 mm., 92.7 gr. [Pl. II.]

The name XA is new, though a comparison with the coin published in *Num. Chron.*, *ibid.*, no. 34, shows that X[A] should be read there also instead of the doubtful A, Δ, or Λ suggested. The obverse die is of great technical interest: in between the two striking the lower half has been planed down and re-worked, with the result that the distance from the forehead to the point of the chin has been considerably shortened. This has given the whole head such a different appearance that, but for the flaws at either end of the truncation of the neck below, and the identity of the hair, one would hardly have suspected the truth.

24. *Obv.* With single-pendant earring; necklace uncertain; one end of sphendone brought round underneath and tucked in above the ear.

Rev. (a) XIA

↓ 19.0 mm., 88.9 gr. [Pl. II.] Good.

The magistrate is new. The only name beginning with these letters which I can trace is *Χιᾶδης*, a good

Ionic name occurring at Erythrae in the fourth century (Dittenberger, *Sylloge*², 284, 1).

B. LATER SERIES.

Obv. Triple-pendant earring and necklace; in front of face aplustre.

Rev. as before.

25. (a) ΑΓΡΕΩ

↓ 17.5 mm., 90.2 gr.

26. (a) ΑΡΙΞΤ

↓ 19.0 mm., 89.3 gr., good.

27. (a) ΙΞΤΙ

↓ 18.0 mm., 92.5 gr., good.

A table is appended of the coins of Sinope in the find (including those just described), arranged alphabetically by the names of the reverse, with a note of the die positions and the weight in grains.

A frequency table plotted from the weights of the 202 coins of the earlier series in the find shows the same norm (92.3-93.7) as does a table prepared from all the material available to me (308 coins), though as was to be expected from their good condition the highest point (93.0 grs.) is more sharply emphasized.

The occurrence of a few examples of the later issue (B) among coins of the earlier (A) is of interest, especially in view of the absence of any of the "Satrapal" coins with Aramaic inscriptions, which there is some reason to suppose were struck in the intervening period. It is possible, however, that the "Satrapal" coins were concurrent with rather than

prior to the later issue.⁵ The later coins here recorded often differ slightly both in condition and appearance from the earlier, and some may doubt whether, in spite of the owner's statement, they really formed part of the hoard.

At first one wondered whether the "Crimean" hoard now in the British Museum,⁶ which covered nearly the same period and appeared at about the same time, was not really a fragment of the same hoard. But its poorer condition makes this most unlikely, and it contained no examples of the later issues. The deduction made from the Crimean hoard that the upright die position tends to be used on the earlier and the reverse position on the later coins is confirmed, and it is interesting to note that the dies of the barbarous imitations appear to be adjusted at random.

An examination of the way different magistrates are coupled by the use of common dies throws some light on the organization of the coinage. The table below shows all the couplings which I have been able to trace from the material available in the British Museum. Coins bearing heads of the very earliest style, with the names E, EPA, O, NI, EPIE, are only represented in the hoard by a few stragglers. The rest, except ΦΙΛΟ, ΒΟ, ΔΑΙΞΚΟ, ΧΑ, and ΧΙΑ, none of which is coupled with another name, fall into five interlinked groups—a number which the discovery of new die-couplings may reduce still further. As it is, the use of an otherwise unknown type of circular

⁵ *Recueil*², p. 193*.

⁶ Described in *Num. Chron.*, 1920, p. 1.

earring already connects MI(MIKA) of group 3 with MOI and EK of group 4;⁷ the obverse inscription NI connects the last two groups through EK and possibly ΓOI (ΓO); and the otherwise unknown treatment of the head which accompanies NI further links to these the unconnected ΔAI, and ΔH of the last group.⁸

This evidence points to a period of great activity in which two or more magistrates or moneyers worked simultaneously, one taking an obverse die from another, using it, and returning it again; we may compare the similar state of affairs at Cyrene towards the end of the fourth century (B.M.C. *Cyrenaica*, pp. ccxxxi-iii). This outburst of activity is perhaps to be connected with the large military expenditure which must have been incurred during the operations of Datames (which, after at least one abortive attempt, resulted in the capture of the city in c. 370 B.C.), and during the confused period following his murder in 362.

E. S. G. ROBINSON.

⁷ Cp. *Num. Chron.*, Nos. 14 and 26, with No. 25 on which the doubtful reading MOI should be corrected to MIK, as is shown by a coin from the same dies, Naville XII 1702.

⁸ No. 8 above, and *Num. Chron.*, *ibid.*, No. 9.

TABLE I.

Summary of hoard.

ΑΓΗ (20), ↑ 92.6, 91.8, 91.1, 93.7, 93.0; ↓ 93.2, 92.1, 91.6, 94.3, 92.9, 85.9, 92.8, 94.5, 92.3, 91.7, 94.9, 93.1, 92.3; → 93.4; uncertain axis, 93.3.

ΑΓ / Π (3), ↓ 94.1, 93.9; uncertain axis, 92.6.

ΑΡ, APN (4), ↑ 91.6; ↓ 93.6; ↘ 92.4, 90.0.

Α (4), ↑ 92.9, 91.1; ↓ 93.2, 91.5.

ΓΟ (12), ↓ 93.0, 92.2 (2), 92.9 (2), 98.6, 94.3, 88.1, 95.7, 93.0, 91.9; ← 91.6.

ΓΟ / Ξ (2), ↓ 94.6, 93.1.

ΓΟ / Φ (3), ↓ 94.1, 93.3, 92.5.

ΓΟ / Ω (1), ↓ 93.1.

ΝΙ on obv. ΓΟΙ (1), ↓ 92.7.

ΔΑΙ, ΔΑΙΞΚΟ (15), ↓ 92.2, 91.7, 94.1, 95.7, 93.3, 95.2, 87.3, 95.0, 91.0, 94.3, 95.2, 92.7, 91.3; ↓ 93.2; uncertain axis, 94.1.

ΔΗ (7), ↑ 93.0; ↘ 93.7, 92.3, 93.3, 94.0; ↓ 92.6; → 93.1.

ΔΙ, ΔΙΟ (12), ↓ 92.7, 93.5, 89.0, 93.4, 94.4, 92.7, 92.3, 92.0, 91.6, 93.1, 88.9; uncertain axis, 92.6.

ΔΙΟΞΚ (3), ↑ 91.0; ↓ 95.2, 94.5.

Δ (1), ↓ 92.0.

ΕΚ (5), ↑ 92.8; ↓ 87.5, 92.3, 92.7, 93.1.

ΝΙ on obv. ΕΚ (1), ↓ 93.4.

ΕΚ / Ε (1), ↑ 92.8.

ΕΠΙ (1), ↓ 93.4.

ΕΡΑ (4), ↑ 92.8, 91.5; ↑ 92.6; ↓ 93.2.

ΕΡΑ / ΗΡ (4), ↑ 93.2; ↓ 92.5, 93.3, 94.2.

Ε (2), ↑ 93.0; → 92.6.

Ο (1), ← 91.9.

ΜΙ, ΜΙΚΑ (5), ↑ 92.9 (2), 92.6, 92.3, 93.0.

ΜΙ / Ξ (1), ↑ 94.4.

ΜΟΙ (8), ↑ 90.5, 87.9, 88.6, 92.0, 96.1; ↓ 92.1, 92.3, 91.7.

ΜΟΙ / Ξ (1), ↑ 90.2.

ΡΑΞΙ (9), ↓ 93.1, 93.3, 94.6, 92.7, 93.0, 93.6, 92.8, 93.2; ↓ 93.2.

ΡΟΛ, ΡΟΛΙ (3), ↑ 92.4, 92.0; ↓ 91.1.

ΠΟΞ (3), ΠΟΞΙ (17), ↓ 92.6, 92.7, 91.9, 93.5, 95.7, 93.1 (2),
97.4, 94.4, 92.1 (2), 92.9, 94.7, 93.3, 93.4, 93.9, 89.7.

ΠΡΟ (3), ↑ 91.6; ↓ 92.9; → 91.9.

Π (3), ↓ 92.4, 91.7, 89.2.

ΦΙΛΟ (5), ↓ 95.3, 92.7, 92.3, 90.6; uncertain axis, 93.4.

ΧΑ (5), ↓ 94.6, 93.6, 84.1; ↘ 92.9, 92.7.

ΧΙΑ (1), ↓ 88.9.

?/Ε (1), 93.4.

Uncertain letters, some perhaps uninscribed (24), ↑ 92.9 (3),
92.0, 93.7, 91.3, 92.6, 95.3, 87.3, 93.8, 91.9; ↓ 90.6,
88.0, 93.6, 93.7, 93.8, 93.3, 94.0, 92.3, 91.9; ← 88.9,
87.3; → 94.0, 93.4.

Barbarous style (various letters) (9), ↑ 93.0; ↓ 94.0;
↘ 92.4; ↙ 89.7; ← 94.3, 94.0; → 92.7, 93.3, 75.5 (sic).

Later issues

A. With aphlaston.

ΑΓΡΕΩ (1), ↘ 90.2.

ΑΡΙΞΤ (1), ↓ 89.3.

ΙΞΤΙ (1), ↓ 92.5.

ΚΑΡΓ (1), ↓ 81.0.

B. Without aphlaston.

ΑΓΡΕΩ (2), ↘ 63.6, 67.8.

ΘΕΟΤΙ (1), ↓ 72.6.

ΦΑΓΕΤΑ (1), ↘ 65.7.

II.

THE RATIO OF SILVER TO GOLD DURING THE PELOPONNESIAN WAR: I. G. I², 301.

THE ratio of gold to silver in antiquity was not constant, and it is notoriously hard to determine it at any given date. Indeed, a conventional ratio is hardly likely to exist, except under a bimetallic system. Croesus, it is well known, was a bimetallicist, and his ratio ($13\frac{1}{2}:1$ or $40:3$) is well established. The Athenian mint was bimetallicist for a very short time at the end of the Peloponnesian War, and its ratio, according to explicit ancient statements, was $10:1$. It has been sometimes believed that Athens indeed practised bimetallicism throughout her hegemony, keeping her silver mint in Attica and her gold (electrum) mint on the Propontis. But it is extremely hard to determine the ratio between the Kyzikene stater and the Attic drachma, and I imagine that to maintain any fixed and permanent ratio was beyond Athens' power of financial control.

For the Propontis staters, Janus-like, looked at least two ways at once: to the Persian daric and the Attic drachma. In the controversy which still rages as to the ratio of these three denominations, the question of the ratio of gold to silver has necessarily to be begged. I think that a fifth century Attic document containing not merely equations, but *explicit statements of ratio*, should be of value, if not in solving problems, at least in controlling hypotheses.

Such a document exists in the British Museum Inscription No. 24.¹ It has been frequently published, most recently in I.G.I², 301, but the statements of ratio have not hitherto been deciphered. In the following paper I take the text of I.G.I² as my basis, but my own readings often differ materially and I have indicated them as they occur. I am glad to have had many of the important variations confirmed by so eminent an epigraphist as Dr. B. D. Meritt.

The stone is unfortunately incomplete, but during the century for which it has been accessible to scholars much has been done towards the restoration at least of its side face. The work of restoration is helped by the frequent occurrence of certain *formulae*, and I have devoted my first section to determining these as exactly as possible.

The date of the document, except that it is from some time in the Peloponnesian War, has never been fixed. I believe that Perikles' name occurs in line 22, and that the document is from one of the earliest years of the war, probably 431 B.C. My grounds for this, historical and epigraphic, lie rather outside the numismatic province, and I reserve them for another occasion.

It is a document of the annual *Tamiai* (Treasurers of Athena): it records, like many other extant documents (I.G.I², 293-309, cf. 324), payments made by them to the Hellenotamiai (Imperial Treasurers) for war expenses.

¹ I must thank the Museum authorities for facilitating my repeated inspections of this stone.

I. FORMULAE.

Two categories of money are distinguished: the money received from the previous *Tamiai*, and the year's revenue.

For the year's revenue, the formula is *αργυριον*, &c., *το επετειο ho αυτοι χσυνελεχσαμεν*, or *στατεραι*, &c., *τον επετειον hon α. χ*: the relative is probably both times in the genitive, attracted to its antecedent. I translate this formula briefly "*out of income*".

For the money received from the previous *Tamiai*, the formula is *αργυριον*, etc., *ho παρελαβομεν παρα τον προτερον ταμιον*, or *στατεραι*, &c., *hon π. π. τ. π. τ.* Here again the relative is probably genitive both times, attracted to an unexpressed antecedent *εκεινο* or *εκεινον*, "silver, out of that which we received", "staters, out of those which we received". In line 57 we have *στατεραι hos παρελ[αβομεν*, without attraction. In line 67 we have perhaps² *αργ[υριον... hon π[αρελαβομεν*, where the relative would be certainly genitive. I translate this formula briefly "*out of reserve*".

These long formulae occur astonishingly often. The genitives are plain partitive genitives, and it is probably wrong to restore *εκ* before them, as in I.G. I², lines 3, 21, 28, 33, 40, 58, 59, 61.

In l. 14 I read $\xi|\circ$ ³ instead of $\Sigma|\circ$ given in I.G. I²,

² So I.G. I², but perhaps we should restore e.g. *ho υπ[ο τον -ον το]ν προτ[ερον]*.

³ Only the right hand edge of the letter is preserved, and I do not think that there was ever more in modern times. I have therefore dotted it, for the right hand edges of *E* and *Ξ* are similar, especially where the letters are (as here) very much "swollen", i.e. the original cuttings have been channelled deeper and wider probably by water. But I have little doubt it is *E*.

and suggest to restore το ἐπετέξιο ἡο ἡοι χσυμμαχοι [ἐσενενοχασι, *vel sim.* Although the prytany in question seems to be early in the Attic year, I imagine this means the "quotas" of tribute: for the revenues which Athena derived from her domains in the empire⁴ were not in any reasonable sense "contributed by the allies". It looks at first sight as if a contrast were implied between "revenues brought in by the allies" and "revenues collected by ourselves": but this is in fact unlikely, for no such separate category now appears in the totals (lines 64-124) and it can hardly have appeared in the missing lines 70, 71. I believe, indeed, that one such allied quota, the Thasian, may be recognized in lines 114-20 (see below, p. 24): and there the formula is fairly certainly τὸν ἐπετέξιον ἡὸν ἀ[υτοὶ χσυνελεχσα]μεν.

Four main classes of precious metal are distinguished:

1. Silver Attic coin: ἀργυριον ἐπισεμον ἡεμεδαπον.
2. Other silver: ἀργυριον (ἀλλοδαπον) ἀσεμον καὶ ἐπισεμον, in which the coined silver is presumably non-Attic.
3. Gold staters and hektai: some from Lampsakos, some apparently from elsewhere. Three types of gold stater appear to be distinguished in lines 93-103.
4. Uncoined gold.

For the purpose of accounting, all these had to be reduced to one currency, namely Attic silver drachmas

⁴ Thuc. 3. 50. 2, and the inscriptions quoted in I.G.I², p. 284, lines 85 sqq.; also I.G.I², 304, lines 20 and 34.

and talents. Can we define the appropriate formula for each class?

Class 1 is simple: the mere count gives the required value. *Formula*: *αργυριον επισεμον ημεδαπον*, e.g. ΤΗΔ.

Class 2 is hardly less so: the *weight* gives the value. The inscription is so fragmentary that the word *σταθμον* cannot be instanced with absolute certainty for Class 2, but in line 78 [*σταθμον τουτο*] is almost certainly to be supplied, and in line 60, if the supplement in I.G.I² is right, the Aigina staters are part of this miscellaneous silver. *Formula*: *αργυριον (αλλοδαπον) ασεμον και επισεμον σταθμον (τουτο, or ηελκον)*, e.g. ΤΗΔ.

Class 3, if we may judge from lines 93-103 and 120-3, is also fairly clear. The gold coins (stater or hekte) were *tariffed*: so the number of coins is stated, and immediately translated into its value in Attic silver. Since the simple numerals ΧΗΔΓ, &c., mean 1,000 drachmas, 100 drachmas, &c., and are thus not available, special numerals are used: for staters Η, Δ, &c.: one stater = Σ: for hektai, the numeral (always less than 6) is written out, e.g. τετταρεσ. *Formula*: (*Δαμψακενοι*) στατερεσ, e.g. Η, *hekta*, e.g. πεντε, *αργυριον τουτον γιγνεται*, e.g. ΧΧ.

Class 4 is perhaps the most interesting. Here we have bar gold, presumably pure, which is weighed, and then translated into Attic silver at a given rate of exchange. Three things are therefore stated, (A) the weight, (B) the silver value, (C) the rate of exchange. There is some difficulty in establishing the actual wording of (C): I give the *formula* as it stands in lines 116-20, with two alternative supplements: *φθοι-*

[δεσ χρυσιο Σκαπτ]εσυλικο [σταθμον ηελκοντ]εσ ΗΗΗ·
αργυριον τουτον γιγνεται Χ[ΧΧ λελογισμενον] δεκα-
στασιον, or Χ[ΧΧΠΗΗΗΗ τρισκαι] δεκαστασιον.⁵

The informality of Attic documents is an astonishing fact: it is no good expecting a too exact repetition of formulae (cf. line 8, *αυτοι τον*, which is perhaps just carelessness). But that, e.g., gold staters and Attic drachmas do not need weighing, and all other gold and silver does, and that gold (whether a given number of staters or a given weight of metal) needs translating into silver, is certain, and we can build on such facts. In lines 21, 26, 27, 60, where the word *σταθμον* occurs, we have to do with payments of Class 2 or Class 4. In line 46 *στα]θμο[ν* is uncertain and anyway quite isolated. The word *σταθμον* does not occur, as I will show later, in lines 53, 108, 120. In line 54 before *το]ντον* we could supply either *σταθμον* or *αργυριον*.

II. ΔΕΚΑΣΤΑΣΙΟΝ.

Some part of the word *δεκαστασιος*, or of a similar word (e.g. *δοδεκαστασιος*, *τρискаιδεκαστασιος*), occurs in our document four times, though it has in no case been previously recognized.

Line 53 *δεκαστα.ιο σιοφθο*: e.g. *δεκαστα[σ]ιο[ν]*, *χρυσιο φθο[ιδας]*.

Line 108 *.εκαστασ.*

Line 114 *.τασιον.*

Line 120 *δεκαστασ.*

Previous editors have restored the traces in three cases out of four as *δεκα, σταθμον*. Some months ago,

⁵ *Δεκαστασιον*, or *τρискаιδεκαστασιον*, is presumably an adverb: *λελογισμενον* would be genitive plural agreeing with *τουτον*.

when examining the stone, I noticed that these restorations were impossible. In lines 108 and 120, the traces of a *sigma*, where a *theta* would be needed, are quite unmistakable: and in line 53, the letter given by previous editors as M is not M but a fairly legible l.

If the same part of the word occurs in all four places, then that part is probably *-δεκαστασιον*. The N is not indeed certain in line 114, but the left hasta is clear: and the supplement in line 53 is inevitable, if (what is not however certain) in both lines we have the same part of the word. If *-δεκαστασιον* is right, I take it to be an adverb "at the rate of 10 to 1": and after trying over the possibilities I can find nothing better. As an adjective, *δεκαστασιος* means "worth ten times its weight" or "ten times as valuable as", and is applicable to *gold* compared to silver, *not* silver compared to gold. (Cf. Hdt. 3. 95, [Plato] *Hipparchos*, 231 D, Arrian, *Indica*, 8. 13).

The general plan of the inscription on the side-face is fairly evident, and its main outlines are marked in I.G. I².

In lines 64-89 we have (A) the *κεφαλαια αργυριο*, and in 89-92 we have (A1) *συμπαντος κεφαλαιον το αργυριο*.

In lines 92-123 we have (B) the *κεφαλαια χρυσιο*, and in 123 sqq. we have (as I hope to show later) (B1) *το χρυσιο κεφαλαιον συμπαντος*.

The *κεφαλαια αργυριο* and *κεφαλαια χρυσιο* are further subdivided into:

- (a) Payments out of reserve (*ho παρελαβομεν παρα τον προτερον ταμιον*): the silver payments are very corrupt, but certainly lines 72-83, and perhaps lines 65-72 also, contain such payments; the gold payments out of reserve are in lines 93-114.

- (b) Payments out of income (το επετειο ho αυτοι χουνε-
λεχσαμεν): the silver payments are in lines 83-89,
the gold payments in lines 114-23.

And the gold payments are in each case (both out
of reserve and out of income) further subdivided into:

- (a) Coined gold; staters and hektai.
(β) Uncoined gold; mainly "phthoides", "bars".

In tabular form:

- A. κεφαλαια αργυριο (64 to 89).
a. Silver payments from reserve ([? 65-72]; 72-83).
b. Silver payments from income (83-9).
A 1. συμπαντος κεφαλαιον το αργυριο (89-92).
B. κεφαλαια χρυσιο (92-123).
a. Gold payments from reserve (93-114).
a. Coin (93-103).
β. Bars (103-14).
b. Gold payments from income (114-23).
β. Bars (114-20).
a. Coin (120-3).
B 1. το χρυσιο κεφαλαιον συμπαντος (123-4).
B. b. β. Lines 114 to 120.

Among the gold totals there are three which are of
uncoined gold: two categories of uncoined gold are
from the reserve (B. a. β.), and one is from income
(B. b. β.). I begin with B. b. β., where it is possible
to restore very nearly the whole text. The line is of
21 letters.

[τον επετε

115 ιον hon α[υτοι χουνελεχσα
μεν φθοι[δεσ χρυσιο Σκαπτ
εσυλικο [σταθμον ηελκοντ
εσ ΗΗΗ α[ργυριον τουτον γι
γνεται Χ[ΧΧ λελογισμενον
120 δεκαστασ[ιον.

I have noted above that two restorations are possible in line 119, both sound, epigraphically and mathematically: X[XX λελογισμενον] δεκαστασ[ιον, and X[XX^πΗΗΗΗ τρισκαι]δεκαστασ[ιον.⁶ I have no doubt there are still other possibilities. We cannot, in fact, determine absolutely the rate of exchange from this entry. But we may note that the number of *phthoides* is not stated: on the other hand, they make up exactly three minas weight. It is a miscellaneous collection of bars making up a round weight: and it is from the Tamiai's own income. Is not this the Thasian quota? Three minas of gold, equal to thirty minas of silver: a mina per talent of the thirty talents tribute from Thasos.⁷

This may throw some light on the rather low rate of exchange. Gold was cheap in Thasos: the Thasians could pay three minas of gold as easily as thirty of silver.

B. a. β. *Lines 103 to 114.*

There are two totals of uncoined gold paid out of the reserve: apparently because the first total is gold

⁶ See note 5 for the grammar.

⁷ The Thasian quota is preserved, in whole or part, in several documents of about this time: I.G.I² 210¹, 211²⁴, 212²⁶, 213²¹, 216¹⁶, 218¹¹. The Skapte Hyle mines were on the mainland, but normally controlled by Thasos, Hdt. 6. 46. 2-3, 7. 118. Athens' lust for them caused the Thasian revolt, c. 466 (Thuc. 1. 100. 2), and the disaster of Leagros probably about the same time (Hdt. 9. 75). When Thasos capitulated, she surrendered her mainland mines (Thuc. 1. 100. 3)—probably for 20 years only: her tribute for those next 20 years is 3 talents, and then jumps to 30 talents. This (the jump to 30 talents, c. 444) is almost certainly the moment when she recovered her mainland mines, and much of the new tribute would be paid in Skapte Hyle gold.

from Skapte Hyle, the second is gold from somewhere else.

The first of these totals is in formula almost identical with what we have just examined: lines 103-8. The number of *phthoides* appears to be given, yet the only numeral which could be written in line 104 as given in I.G. I² is ΔΥΟ. There are, however, traces of Σ after ελ]κοντε in line 105, and this excludes δυο. Either the number was not written, but given in signs: or else we must drop the aspirate from ηε]λ-κοντες (or assume 22 letters in line 104) and write, e.g., δεκα.

This much may remain uncertain: but for the remaining numerals in this section we can, as I believe recover within a very little the exact figures. The following restoration of lines 53-4 gives an 84-letter line: χρυσιον] δεκαστα[σ]ι[ν· χρυ]σιο φθο[ιδας] Σκαπ-τεσυλικο δεκα, τον παρελαβομεν παρα τον προτερον ταμιον· σταθμον το]υτον ΤΧΧΧΗΗΗ⁸ [Δ]Δ [.αρ]γ[υρι]ο[ν] ε] &c. The bulk of this restoration is merely illustrative, and I will not spend time defending it: the sense we require can be easily given in the space available, that is all. The restoration of the figure is more important: and this is certain, with the exception of the final sign, where we can only say (from the position of αργυριον following) that there is one sign and no more: Δ or Γ or †.

Here then we have the weight of a number of gold bars, *phthoides*. Multiply this figure by 10; we get, for the value in Attic drachmas:

⁸ The ⁸ is given as H in I.G. I², wrongly. The γ of αργυριον is legible.

ΔΤΧΧΧΠΗΗ.

The last sign will be Η or Π or Δ according as Δ or Γ or τ stood in line 54.—Given a 21-letter line for lines 106-7, we have there, for the value in Attic drachmas:

.. ΤΧΧΧΠΗΗ.

There can hardly be any question, I think, that these two silver figures are identical. We have, moreover, 11 spaces for the gold figure in line 105, and the gold figure in line 54 occupies exactly 11 spaces.

We may, therefore, restore with confidence (finding at the same time the confirmation of the ratio 10 to) :

	φ[θοιδεσ χρυσιο Σκ	21 letters.
	α]πτεσυλι[κο ? δεκα' σταθμον	21 "
105	ε]λκοντες [ΤΧΧΧΗΗΗΠΔΔ. αρ	21 "
	γ]υριον το[υτον γιγνεται Δ	21 "
	Π]ΤΧΧΧΠΗΗ[. λελογισμενον	21 "
	δ]εκαστας[ιον.	

This is in all essentials the same formula as in lines 116-20. But the *second* total of uncoined gold paid out of reserve (lines 108-14) presents some puzzling variations. The legible remains are (lines 109-14):⁹

	.ιοφθοισ
110	.ατεδνο
	.ΧΧΠΗΗΗ
	..γγγγ
	.πραθεα
	.τασιον

⁹ I have read new letters at the ends of lines 109, 113, 114, and at the beginning of 113.

In line 113 we may probably restore $\epsilon\pi\pi\rho\alpha\theta\epsilon\ \alpha[\rho\gamma\upsilon\rho\iota\omicron]$. Note that there is a singular in 109, a dual in 110, a plural in 112 (if $\tau\omicron\upsilon\tau\omicron\tau\omicron\nu$ be restored), a singular in 113. It is easiest, I think, to suppose there are three objects in question, one *phthois* and two *-ate*: these are then referred to in the neuter plural.

What are the two objects ending in *-ate*? I.G.I² gives $\kappa\epsilon\rho\alpha\tau\epsilon$. So short a word requires that the weight of the *phthois* and of the $\kappa\epsilon\rho\alpha\tau\epsilon$ be given separately: but, as we are dealing with totals, I find this rather improbable. Moreover, gold $\kappa\epsilon\rho\alpha\tau\epsilon$ should be drinking vessels¹⁰ rather than masses of bullion, which *ex hypothesi* have got to weigh at least 28 minas between them!

Possibly help may once more be sought from the front face, where the items here totalled were given in full. The word we want perhaps occurs in line 26, where we read $-\sigma\mu\alpha, \sigma\tau\alpha\theta\mu\omicron\nu \times\Gamma^B$. I must therefore break off, to examine lines 24-7.

III. $\chi\sigma\upsilon\mu\pi\epsilon\rho\alpha\sigma\mu\alpha$?

A series of three payments is noted in lines 24-7; their common date appears in line 23; the second and third payments begin with the phrase $\eta\epsilon\tau\epsilon\rho\omicron\upsilon\nu\ \tau\epsilon\iota\ \alpha\upsilon\tau\epsilon\iota\ \epsilon\mu\epsilon\rho\alpha\iota$. The description of the second payment ends with the word $-\sigma\mu\alpha$.

It may be noted that, while the second payment is a round figure ($\times\Gamma^B$, 15 minas), the first and third

¹⁰ See Athenaeus XL 51 (p. 476). He devotes a chapter to $\kappa\epsilon\rho\alpha\sigma$ and quotes Pindar, Aeschylus, Sophocles, with several other fifth and fourth century authorities, including an inscription of the *Poletai*.

stretch down to obols. These, however, *when added together also give a whole number of minas*:¹¹

line 25	—HH [⊖] ΔΔΔΔ††||	= (2)92 drach. 2 ob.
line 27	ΠHHHΓ††|||	= 807 „ 4 „
Total	XH	= (11)00 drach.

My hypothesis is that these three payments are the *phthois* and -σμ]ατε of lines 108-14. The first payment is a single bar of gold, of odd weight. The second is a *collection of bars, of round weight*, such as we have in lines 116-18. The third is the balance of a second such collection of bars, *minus* the single bar which has been taken out for the first payment.

The surface at the beginning of line 26 is extremely bad: after examining it closely, I doubtfully report traces of M five places before the Σ of -σμα: -μ σμα. In this, if my hypothesis is correct, we must find a word which will describe such a "collection of bars, totalling up to an even weight".

I suggest, most tentatively, ΧΣΥΜΓΕΡΑΣΜΑ. This word usually means the *conclusion* of a syllogism: but I think συμπεραίνειν might mean "to combine to make up a sum" as properly as "to combine to produce a conclusion". I do not press the particular word: if I have rightly read μ in line 26, I think this points strongly to a word beginning χσνμ- and ending -σμα.

The next test to apply is, do the figures in the two passages agree?

The figures in lines 25-7 (front face) are complete, except that some multiple of 100 drachmas may be missing from the beginning of the figure in line 25.

¹¹ I.G. 1² gives only 3 obols in line 27, instead of 4.

As they stand, they total to 26 minas (XX^ΠH). The total preserved in line 111 is XX^ΠHHH, 28 minas. Nothing would be easier than to restore two more *mina*-signs at the beginning of line 25 (HH^ΠHH^ΠΔΔΔ Δ††||), and the two totals then will agree: and this I believe is correct. But the figure in line 111 is unfortunately isolated, and we cannot be certain that it is complete, and had no other number signs before or after it. It is indeed improbable that there was room for any number sign before it, but there is apparently plenty of room after it: and any figures, however small, will spoil our concord. The case will be most clearly seen if I put down my hypothetical restorations.

	[δαρεικο χρυ	21 letters
	σ]ιο φθοισ[και χσυμπερασ	20 "
110	μ]ατε δυο, [σταθμον ηελκοντ	21 "
	α]XX ^Π HHH [αργυριον του[[του]]	18 (21) "
	το γ γιγν[εται ^Π ^Π HHH ταυτα	21 "
	ε]πραθε α[ργυριο ηενδεκα	20 "
	σ]τασιον [ε ε ε ε τον επετε	20 "

It will be seen that it would be hard ¹² to find room *before* the figure in line 111, but there are three spaces *after* it. I have suggested a dittography: but it remains, I confess, as something of a flaw in the hypothesis.

Another possibly serious obstacle is the suspicion that the three payments in lines 25-7 are really in "miscellaneous silver" and not in uncoined gold. The word *αργυρ]ιο* in line 24 suggests this. The restoration which certainly lies nearest to hand is

¹² It would mean dropping the aspirate of *ηελκοντα*.

αργυρ[ιο | ν αλλοδαπον ασεμον και επισεμον ho παρελα-
βομεν παρα τον προτερον ταμιον· σταθμον]ΗΗ^Π &c.
This gives an 86-letter line (or with *χσερικον* *vice*
αλλοδαπον 85 letters): and this is entirely probable, if
just a little long.

This is not indeed fatal. The following gives a
line of 84 letters:¹³ αργυρ[ιο | πεπραμενον χρυσιον
ενδεκαστασιον· δαρεικο χρυσιο φθοιδα σταθμον ηελκοντα
ΗΗ]ΗΗ^Π &c. I may say again, such a restoration has
only illustrative value, and it is hardly worth defence:
but a comparison with my restoration of lines 53-4
already given will show similar forms of expression
giving the same length of line.

A few consequences of the hypothesis. The single
phthois weighs nearly 5 minas; the first *xymperasma*
weighs 15; the second 13 in all, or just over 8 without
the *phthois*. This is money from the reserve: presum-
ably it did not come in as quota (as the 3 gold = 30
silver minas in lines 118-19 very probably did) but as
phoros from Asia Minor, deposited some time or other
by the Hellenotamiai as part of their surplus. [Simi-
larly, the talent and a half of bar gold (= just over
15 talents of silver) in lines 103-8 is probably Thasian
phoros.]

Why was the payment made in three lumps in one
day? I find this very hard to explain on any hypo-
thesis. If it is really gold (and especially gold sold
at the special rate of 11 to 1 instead of 10 to 1 because
a buyer was available) perhaps the merchant who

¹³ This is the normal length: No. 296 has lettering of almost
exactly the same size, and has 84 letters. No. 302 has probably
85 (I.G. 1² gives 86). Line 32 can be comfortably accommodated
to this. I have restored 84 letters also in line 54, see above.

bought it for silver made three successive bids: or perhaps (since there seems room for the names of three Hellenotamiai in line 24) each payment was to a separate Hellenotamias.

If the payment was in gold, the silver value must follow, at the beginning of line 28: [ἀργυρίου ταύτων γίνεται, e. g. ΠΠΗΗΗ].

IV. STATERS.

There are four totals of staters: three totals out of reserve in three different types of stater (lines 93-103), and one total out of income in one type of stater (lines 120-3).

The totals out of reserve have been discussed by Mr Woodward, J.H.S., 1914, pp. 278 sqq. Of the three types, the first is Lampsakene,¹⁴ the second has no name preserved, but Mr. Woodward assumes (rightly, I think) that it is Kyzikene. The third is called by Mr. Woodward Φοκαϊκοί στατ[ερες]. Thucydides calls the staters of Phokaia Φοκαῖται, and I am more inclined to restore δαρεῖκοί.¹⁵

Mr. Woodward further rightly observes

(i) That however we restore the gold figure of the Lampsakenes, their silver value cannot be less than 4,000 drachmas. We have then to clear a space for a number sign at the beginning of line 96: 95 must have 22 letters (e. g. Α| of γίνεται in one space) or else a shortened formula.

(ii) That in the third type of stater the ratio is not any whole number to one: for the gold figure

¹⁴ The stone has ΛΑ|ΜΦΣ|Ακ, not Λ|ΑΦΣ|Ακ.

¹⁵ Thuc. 4.52.2, 8.28.4, Hdt. 7.28.2.

ends with 4 hektai (i.e. $\frac{4}{6}$), the silver figure with 1 obol (i.e. $\frac{1}{6}$). $\frac{4}{6}$ multiplied by any whole number will not produce a residue of $\frac{1}{6}$.

(iii) That this does not necessarily apply to the first two types, for which indeed he shows with great adroitness that a ratio of 24 to 1 will work.

I believe this last question might almost be solved, if we could be certain of the reading in line 123. Mr. Woodward has not discussed this total,¹⁶ since in I.G. I¹ which he used (and in I.G. I² also) no numerals at all are given. There is, however, beyond question a number sign in line 123: though I cannot determine whether it is H (100 drachmas) or || (2 obols). It stands in the second place, and of the sign in the first space there are also, I believe, traces. The silver figure was 9 spaces long; the gold was 5 or 4 spaces, i.e. it is a whole number of staters, with no hektai.

I thought at first the sign was ||, 2 obols. The two strokes are unusually close together for an H (though the second H in line 111 is almost as narrow): there is an erosion where the cross stroke should come, but enough of the surface is left to show that the cross stroke must have been cut exceedingly shallow, where it should join the right hasta.

If we take it as 2 obols, then once again we can exclude any ratio of a whole number to one. A whole number of staters gives us a fractional number of drachmas. And I think it rather improbable that the staters in question are of that third type which Mr. Woodward called Phocaeian, and for which he posited a different and more complicated ratio. Rather

¹⁶ This is the total of staters paid out of income, lines 120-3.

I should suppose the staters we are considering to be Kyzikene, for the following reasons.

1. In line 120, after δεκάστασιον, there are 11 more spaces: I would restore δεκάστασιον ε Κυζικηνοι. The one vacant space exactly answers the one vacant space in line 103: a transition from coin to bullion there, from bullion to coin here. Either Φοκαῖκοι or δαρεικοί would leave two vacant spaces.

2. More cogent seems to me the argument from the items. We can recognize four items on the front face which are probably to be included in this total. Lines 7-9 contain two payments *in gold and out of income* for an expedition to Peloponnese in an early prytany, i.e. in autumn. These payments must be in gold *coin*: unless (what seems to me on many grounds improbable) we have here portions of the three minas weight of bar gold mentioned in lines 114-20, which was, we have seen, most probably the Thasian quota.¹⁷

Other payments this year in *gold coin and out of income* are recorded in lines 32 and 59. The figures in both these lines denote staters, though the *sigmas* are omitted in IG. I²: they are easily legible on the stone. These four payments therefore (and possibly others also) are all included in the one total which we are considering, lines 120-3. They must therefore be all in staters of one type. Beyond question the staters which flowed most abundantly to Athens were the Kyzikenes. When all the four payments out of income are in one type, the chance that they are Kyzikenes is very strong.

¹⁷ The *exereta* of the Tamiai were considerable, and the quotas a small fraction of them only. Line 85, the amount of silver income *paid out*, is between 50 and 100 talents.

If, then, the silver value of these staters ends with a 2 obol sign, the ratio 24 to 1 for Kyzikenos must probably be abandoned.

But I now think it more probable that the sign is H, 100 drachmas: cut rather narrow, with an unusually shallow cross stroke. If this is so, then the 24 to 1 ratio may very well stand. *Exempli gratia*:

120 δεκαστασιον v Κυζικηνοι	21 letters
σ]τατερες [X X X H v αργυριον	21 ..
τουτον γ[ιγνεται Π Τ Τ Τ Χ Χ Χ	21 ..
Π] Η v v	

In the first space of line 123 there remains what looks like the right-hand stroke of Π (or Π). If this be so, I believe this restoration is unique,¹⁸ unless we go into improbably high figures. It leaves a vacant space in line 121: but it will be noted that wherever we can restore figures in these stater totals (whether certainly, as in line 101, or on the 24 to 1 hypothesis, as in line 97) such a space does in fact occur before the word *αργυριον*.¹⁹

The ratio 24 to 1 might be further tested by applying it in lines 33 and 60 to the figures preserved in

¹⁸ I.e. supposing the ratio is 24:1. A whole number of staters must give a multiple of 24 drachmas: the only such multiple which ends with Π H is XXXΠ H (*plus* any number of talents). The only figure with four spaces of talents, and this quantity of drachmas, which translated into staters will take four or five spaces, is the number given, until we reach such high figures as 22 or 26 talents. However, the sign before H might be another H, and this allows of a great number of restorations: e.g. 850 or 1075 staters (3 T. 2,400 drachmas or 4 T. 1,800 drachmas).

¹⁹ Cf. Woodward, J. H. S., 1914, p. 279, foot, who points out that line 95 is no real exception.

lines 32 and 59. At present, however, the unknowns seem to me too many for this experiment: I cannot even be certain if the second sign of the figure in line 59 is 100 staters or 50 staters.

It is therefore with reserve that I print in my text Mr. Woodward's restorations in lines 93-103, and my own in lines 120-3.

V. GRAND TOTALS.

In lines 123 sqq. stood the Grand Total of the gold paid out in the year. After $\tau\theta$ in line 123 is a diagonal stroke as of Y or X: the letters legible in line 124 are $\Upsilon \text{M} \Gamma \Delta \cdot \text{I}$. I restore:

$\text{[H]} v v \tau\theta \chi\rho\nu\sigma\iota\sigma\ \kappa\epsilon\phi\alpha\lambda\alpha\iota\omicron\nu\ \ \ \ 21\ \text{letters}$
 $\sigma\nu\mu\pi\alpha[\nu]\tau\theta\sigma$

This total embraces bar gold of two different values, and three types of coined electrum. The only thing common to all three which can be totalled is their silver value. This could be expressed by such a phrase as *αργυριο λελογισμενον*.

I have attempted no restoration of the silver figures: that is another, more purely financial, enquiry. But I may perhaps add a note on the Grand Total of silver, in lines 89-92.

The first letter in line 91 cannot be O, and is almost certainly E. The letter after the *και* is difficult. What certainly looks like part of the top stroke of a T is, I think, too far to the left: I believe there is a faint hasta visible, which certainly is too far to the left to be the down stroke of a T; it could belong to B, E, H, K, L, N, Γ, P. If this is so, the apparent top stroke of the T will be one of the many irrelevant gashes on this

stone. I should be extremely glad of other opinions on this letter.

Provisionally, I read and restore:

συμ[παντος κεφαλαιον	21 letters
90 το αργ[υριο Αθηναιας Νικ	20 "
εσ και [ολιαδος και Ηερμο	21 "
.. Η[ΡΑ [.. κεφαλαια χρυσιο	21 "

Nike's separate total stood in line 88, and occupied apparently 13 spaces. This is not indeed unlikely, but Hermes' separate total must have stood somewhere.²⁰ I suggest for 88-9 *αργ[υριο . . . Ηερμο . . | . || v.*

VI. CONCLUSIONS.

The following conclusions may perhaps be drawn tentatively.

The electrum staters of Lampsakos and Kyzikos were computed in drachmas at a fixed ratio which did not need stating. It may be probably estimated at 24 to 1: 250 staters made a talent.

A third type of stater was likewise computed at a fixed ratio which did not need stating, but it was apparently a different ratio from the above, and more complex. We may perhaps infer that whereas the Propontis stater was in some sense an imperial currency controlled by Athens, the third type of stater (which I have conjectured to be the daric) was not.

Raw gold, inside the Empire, was conventionally tarified at 10 to 1: i.e. the gold-producers (Thasos)

²⁰ See line 12, *Ηερμο απο πρι[τασιον*. What these *πριτασια* were (not, I imagine, law-court fees) is unknown. Possibly Hermes' total was in line 69, though the last letter there looks to me as much like κ (HEK) as ρ (HEP).

were made to sell their gold (or at least pay tribute) at this rate. This was, however, below its market price when a buyer was available.²¹

These conclusions, if valid, are of course valid only at the date of our document.

VII. TEXT: I.G. I², 301.

[Many of the restorations are hypothetical, especially in lines 90-4, 96-9, 104, 108-14, 120-5. The 20-letter lines, 90, 109, 113, 114, are *eo ipso* slightly suspect.]

..	υ συμ[παντοσ κεφαλαιον	21 letters
90	το αργ[υριο Αθηναιασ Νικ	20 "
	εσ και [ολιαδος και Ηερμο	21 "
	.. ΗΠΔ [.. κεφαλαια χρυσιο	21 "
	Δα]μφο[ακεινοι στατερεσ ΧΗ	21 "
	ΗΗΗΠΣΣ[Σ ηεκται τετταρεσ	21 "
95	α]ργυρι[ον τουτον γιγνεται	22 "
	Π]ΧΧΧΠΗ[ΗΗΠΤΤΤ Κυζικενοι	21 "
	σ]τατερ[εσ ΜΠΣΗΗΗΠΣ υ αργυ	21 "
	ριον τ[αυτον γιγνεται ΔΔΔ	21 "
	ΔΤΤΤΧΧ[ΧΧΠΗΗΗΗΔΔ δαρεικ	21 "

89-92, pp. 35-6.

92 κεφαλαια χρυσιο: see the tabular analysis on p. 23.

93-103: pp. 31.

96: after Π a hasta is visible, as of Η, Π, &c.

97: alternatively, for the last three number signs, ΠΠΣ.

99: alternatively, for the last nine number signs, ΠΔΔΔΔΤΤΤΤ.

²¹ It is possible that the special ratio in lines 108-14 was partly due to the gold being of better quality than the Thasian. But *εμριβε*, if rightly restored, suggests strongly that this was a market transaction and distinct from the conventional valuation. The gold for the chryselephantine statue had been bought, before the war, at 14 to 1: I.G. I², 355.

100	οι στατ[ερεσ] ηε	21 letters
	κ]ται τετ[ταρεσ v αργυριον	21 "
	τ]ουτον γ[ιγνεται	21 "
	. ΔΗΗ v φ[θοιδεσ χρυσιο Σκ	21 "
	α]πτεσυλ[ικο ? δεκα σταθμον	21 "
105	ε]λκοντες [ΤΧΧΗΗΗΠΔΔ. αρ	21 "
	γ]υριον το[υτον γιγνεται Δ	21 "
	Π]ΤΧΧΧΠΗΗ[λελογισμενον	21 "
	δεκαστα[ιον δαρεικο χρυ	21 "
	σ]ιο φθοισ [και χσυμπερασ	20 "
110	μ]ατε δυο [σταθμον ηελκοντ	21 "
	α]ΧΧΠΗΗΗ [αργυριον του[[του]]	21 "
	το]υ γιγνεται ΠΠΗΗΗ ταυτα	21 "
	ε]πραθε α[ργυριο ηενδεκα	20 "
	σ]τασιον [v v v v v τον επετε	20 "
115	ιον ηον α]υτοι χσυνελεχσα	21 "
	μεν φθοι[δεσ χρυσιο Σκαπτ	21 "
	εσυλικο [σταθμον ηελκοντ	21 "
	εσ ΗΗΗ α[ργυριον τουτον γι	21 "
	γνεται Χ[ΧΧ λελογισμενον	21 "
120	δεκαστα[ιον v Κυζικενοι	21 "
	σ]τατερεσ [ΧΧΗΠ v αργυριον	21 "
	τ]ουτον γιγνεται ΠΤΤΤΧΧΧ	21 "
	Π Η v v το χ[ρυσιο κεφαλαιον	21 "
	σ]υμπα[ν]τ[οσ ? αργυριο λελ	21 "
125	ογισμενον ?]	

101 τετ[ταρεσ : the second τ is legible.

103-8: pp. 24 sq.

108-14: pp. 26 sq.

114-20: pp. 29 sq.

120-3: pp. 33 sq.

122 τουτον : traces of the first τ are legible.

123-5: pp. 35 sq.

III.

A PENNY OF BEORCHTRIC KING OF WESSEX.



THE coin illustrated above may be described as follows:—

Obv.—BE·O·REHTRIER·E. Dividing the beginning and the end of the legend is a cross, pendent wherefrom are the letters alpha and omega joined thus, A . An inner and an outer beaded circle, the former divided at the upper part on either side of the cross.

Rev.—ÆP·E·O·CHTHVN; within an inner beaded circle the letter A ; an outer beaded circle.

Weight, 20·6 grs.

Beorchtric, a descendant of Cerdic, was king of Wessex from A.D. 786 to 802 and in 787 married Eadburh, daughter of Offa, king of Mercia.

Offa is the king under whom the series of silver pennies was initiated, and it is, I think, a fair inference that, in view of his position as son-in-law of that

monarch, Beorchtric introduced a similar coinage into his own kingdom of Wessex.

The workmanship of this coin, particularly the introduction of pellets by way of ornament between and within so many letters of the legends, gives assurance to the eye of one accustomed to see the coins of Offa that this coin is a product of the same period, Offa's reign extending from 757 to 796.

The other two coins bearing Beorchtric's name are of a different type from that now under consideration. One of them is in the British Museum and has in the centre of the obverse the letter \mathfrak{A} , alpha, while the centre of the reverse contains a cross with a pellet in each angle (*Catalogue of Anglo-Saxon Coins*, vol. i, Pl. XV, fig. 8). Weight 18.1 grs.

The other, varying in minor particulars, is illustrated in Ruding, Pl. 3, *Kings of the West Saxons*, sole coin of *Beorhtric*, and is in the Hunterian Museum, weight 21 grs. Upon these coins the name of the moneyer **ECCGWARD** has ornamental pellets interspersed in similar manner to those appearing on my coin, and I assign those coins bearing that name to Beorchtric of Wessex.

The letter \mathfrak{A} is probably a derivative or part representation of the type distinctly portrayed upon my coin. The obverse has a graphic presentment of the text, Revelation xxii. 13: "I am the Alpha and the Omega, the first and the last, the beginning and the end," and of the similar words in Revelation i. 8 and xxi. 6. The cross above the letters shows that the person of the Trinity specially indicated is God the Son. The omega on the reverse speaks for itself.

I think it probable that my coin is that illustrated

and described by Samuel Shaw of Andover in a note read before the Numismatic Society on 25 May, 1854 (*Num. Chron.*, vol. xvii, pp. 59-61). He states that it was found within two miles of Andover in the course of the month then last past, namely, in April, 1854. The weight given is 22 grs., an excess of 1.4 grs. over the weight of my specimen. The difference in weight may be due to inaccuracy in weighing and in part to the circumstance that my coin *now* lacks a small portion frayed from the edge of the coin, but in no way obscuring the full presentment of its type and legends.

In the illustration each side of the coin is inverted and the reverse is placed on the spectator's left in the position usually accorded to the obverse. The object of this obvious departure from fact is to convert ω into \mathfrak{M} , for Mercia, and the monogram of $\mathfrak{A}\omega$ into \mathfrak{M} over \mathfrak{A} , the intention of the writer being to confirm the view of Haigh in his *Num. History of East Anglia*, published in 1845, that the coins of Beorchtric belong to a king of that name who was son of Berhtwulf, king of Mercia, and who in A.D. 840 and 845 attested charters to the bishop of Worcester as 'Berhttric filius regis'.

There is in fact no evidence of any kind in chronicle or charter that any person of the name of Beorchtric ever reigned or had authority of any kind in East Anglia, but this remark applies equally to many of the kings assigned to that kingdom.

The symbol \mathfrak{A} , frequently with a mark to indicate contraction, thus $\bar{\mathfrak{A}}$, often occurs upon the coins of kings of East Anglia for whom there is good historical authority, and also upon those of other kings attributed

to East Anglia of whom there is no historical record. In these instances the symbol is stated by Haigh to indicate Anglorum, of the Angles, following on the REX, actual or implied, of the obverse legend.

The coins bearing the symbols of alpha and omega, either in monogram or separately, indicate the original presentment of a religious type. Of this kind, in addition to my coin of Beorchtric, there is a coin of his immediate successor upon the throne of Wessex, viz. Ecgbeorht, having alpha and omega in monogram as the type of its reverse (*Brit. Mus. Cat.*, vol. ii, Pl. I, fig. 2), and there are coins of Ceolwulf (vol. i, Pl. IX, fig. 4), and of Berhtwulf, kings of Mercia, with the same type of reverse (vol. i, Pl. X, figs. 4 and 7).

A coin attributed to Æthelstan of East Anglia has the symbol $\bar{\alpha}$ upon the obverse and $\bar{\omega}$ upon the reverse (vol. i, Pl. XIV, fig. 12). The marks of contraction can only mean that the *words* alpha and omega are indicated by the design.

The letter $\bar{\alpha}$ alone forms the type of the reverses of coins of Coenwulf of Mercia (vol. i, Pl. VIII, fig. 13), and of Æthelwulf of Wessex (vol. ii, Pl. II, figs. 3, 9, and 10).

It will be seen, therefore, that Haigh's view that the $\bar{\alpha}$ on coins of, and attributed to, East Anglia, represents the word Anglorum, is open to grave question.

As regards the names of the two moneyers disclosed by the coins of Beorchtric, that of PEOCHTHVN, on my coin, does not occur elsewhere. The initial letter may stand for either P or W. Searle in his *Onomasticon Anglo-Saxonicum* indexes it under both letters. It is certainly not DEOCTHVN as stated in Hawkins's *Silver Coins of England* (3rd edition, p. 62). The name

ECGHARD on the British Museum and Hunter specimens occurs as **ECGHERD** on a coin of Æthelstan of Wessex, struck at Shrewsbury, formerly in my collection (*Sale Catalogue*, Sotheby's, 1913. lot 390, ill. Pl. XI), but this is of too late a date to have any bearing on the identification of the Beorchtric coins.

P. CARLYON-BRITTON.

IV.

PRIVY MARKS IN THE REIGN OF HENRY V

[SEE PLATES III-VII.]

IN the introductory notes on the coinage of Edward III, Mr. Lawrence¹ has recently drawn attention to the order requiring the Master of the Mint to place on all his gold and silver coins a privy mark by which his work might be identified. As this order follows, or forms part of, the instructions relating to the trial of the pyx, the object that it served was to identify the coinage of what we may call the "pyx periods", that is to say of every three months, with the specimens deposited in the boxes for trial. Though it was soon found convenient to hold the trials less frequently, the pyx periods remained at three months; the order was not changed in the indentures, but was technically carried out by the pyxes being sealed up every three months to await their trial at a later date. It is hardly necessary to emphasize the importance of this quarterly privy mark; a brief summary of the documentary evidence makes it quite clear that, however small the coinage might be at any particular period, it must bear a distinguishing mark which was changed every three months.

The earliest indenture which contains the order for the Master to put a privy mark on the coins is that of 20 June 1361, with Richard de Porche. The order

¹ *Num. Chron.*, 1926, p. 419.

there follows regulations concerning the trial of the pyx, and is in these terms (as quoted in *Calendar of Close Rolls*, 1360-4, p. 293):

The Master shall be bound at his peril to make a privy mark on all moneys he shall make of gold and silver, so that another time, if need be, he may know which are his work among other like moneys and which are not.

The purpose of the privy mark was the identification of the Master's coinage of the particular period; it enabled the jurors of the pyx to satisfy themselves that the money under examination was struck in the period to which it purported to belong, and in the sixteenth and seventeenth centuries, when the trials became annual, the privy mark was recorded annually in the pyx verdict. But it seems also to have served a further purpose, presumably as a safeguard against forgery.

The procedure for the circulation and assaying of the coinage is set out in the indenture of 20 June 1351, with Henry de Brisele and John de Cicestre as Masters (*Cal. Cl. R.*, 1349-54, p. 380):

So soon as the money is coined and completed, the wardens and the masters shall receive it from the moneyers and put it in a hutch² under two keys, to remain in possession of the wardens and the masters respectively: and before the money is delivered to the merchants, the wardens shall assay it . . . when it is delivered and proved good, the wardens and masters shall take of each 100 l. of [silver] money 2 s., and of every 5 pounds weight of gold a gold piece, which money shall be put in guard in a box under two keys and two seals, and the box shall be kept in the hutch and shall be opened once every three months before the council or their deputy and before the said wardens and masters, and the money shall be assayed before them and if it is found good the masters shall have letters patent under

² Coffers?

the great seal to be quit of all claims touching that money and the masters shall not be challenged for any money found in any part of the realm or of the king's power, except of the assay of the coins found in the said box.

This form is copied in future indentures. The coin, when made, is to be tested before the warden of the exchange allows it to go into circulation. If satisfied, he and the Master take out the quota of coins for the trial of the pyx and lock them up: the bulk of the coinage then goes into circulation. At a later date the trial of the pyx is held and the Master gets a quittance for the coinage of that period. This quittance to the Master would seem to obviate any necessity for preventing in his interest the imitation of his coins, except during the period between the circulation of the coins and the next trial of the pyx. On the other hand it was in the interest of the Crown to have the coins marked in such a way as to facilitate the detection of forgery, and for this purpose the secrecy of the mark would increase its efficacy.

Though the first record of an order for a privy mark is not earlier than 1361, trials of the pyx can be traced to the early years of Edward I:³ and one can hardly be wrong in assuming that the trial of the pyx necessitated some marking of the coins for the identification of the period in which they were struck. At all events there are on the early coins of Edward I small points of difference, such as variety of letter-forms and other details, which would appear to serve some such purpose as this. At an early date the custom of holding the trial every three months seems

³ See Mr. H. Symonds in *Brit. Num. Journ.*, vol. ix, p. 209.

to have gone out of use, and the same purpose was served by the pyxes being sealed up every three months to await trial on a convenient occasion, but in the indentures the order still remained for the trials to be held every three months. In the indenture of 1547 with Sir Martin Bowes we find that Edward VI had so far departed from traditional practice as to order the trial to be held twice a year at the mint where the coins were made. At the beginning of the seventeenth century a yearly trial had come into force, and by that time the initial mark (or mint-mark as it used to be called) underwent annual change to serve as the Master's privy mark.

In the coinage of Edward III Mr. Lawrence has indicated certain points of differentiation, such as the varying forms of the letter N, the insertion on silver coins of an annulet or saltire within each successively of the four quarters of the reverse design, which may well have been the quarterly privy marks of the Master. He did not attempt any detailed analysis of the subject, but his remarks, if read in conjunction with his descriptions of the coins of Edward III, are sufficient to show that important results might be obtained from a minute investigation of the coinage of a definite period, and indeed that future work on the medieval coinages of this country will have to proceed in the direction of identifying and arranging extremely minute details of variety in either the designs or the legends.

The find of nobles at Horsted Keynes has provided an opportunity for such investigation. The reign of Henry V, of which there were in the find 17 nobles struck from 15 obverse and 17 reverse dies, offers

a suitable field for this research. The gold and silver coins of his reign are fairly numerous, and the gold coins show in their designs sufficient variety to render possible a general classification of them in broad outline. It is particularly important that nobles should be available in adequate number, because they are almost always better preserved and more carefully struck than other coins.

The difficulty of fixing a beginning and an end to the coinage of Henry V's reign is not very material; for this purpose we are more concerned with the order in which the issues run than with the dates at which they were struck. I have assumed that the coinage of Henry V begins with the issue which has become very familiar to collectors under the inappropriate title of the "Emaciated bust" issue. The portrait on that coinage represents an effort on the part of the designer to display some originality, and for that reason it is likely to be the work of a new Master or of a new reign. It may well be the earliest issue of Henry V designed by the Master Lodowic John who seems from Ruding's lists⁴ to have been appointed at the very end of Henry IV's reign. The order for the light coinage of Henry IV was not to come into force till the Easter following the parliament of November 1411,⁵ that is 3 April 1412, and the light coinage had just one year to run before the king died on 20 March 1413; the light nobles preceding the "emaciated bust" issue are ample to fill this period; the four varieties of the position of the fleur-de-lis in their reverse design may very well mark the four quarters of the year April 1412 to March 1413; the silver is similarly

⁴ Vol. I, p. 33.

⁵ *Ibid.*, p. 255.

adequate for the period and has in legends and stops ample variety for so short a period.⁶

I have no intention of entering at this point into the controversy that has long raged over the line of demarcation between the coinage of Henry V and his successor; I am content to close my investigation before the common annulet issues of Henry VI, and to offer no judgement whether the latest coins that fall into my sphere were struck before or after 1 September 1422.

I have concerned myself primarily with the small varieties which occur in the lettering. It will be seen that towards the end of the reign the lettering ceases to furnish the frequent changes which are characteristic of the earlier issues; this seems to imply a different method of marking the coins, and, though it is possible to place the varieties of the noble in probable sequence, there does not seem to be a complete series in other denominations running parallel; only general equivalents of groups can be found. In

⁶ As on the half-groats (with one exception) and smaller coins of the "emaciated bust" issue the annulet and pellet appear beside the crown, this brings me into conflict with the "annulet-and-pellet" theory. There can be no doubt that the annulet and pellet were marks used on coins of Henry IV, but I see no great difficulty in these marks being still used on some dies after the accession of Henry V; indeed it seems to me more difficult to suppose that such marks would be set aside because a new king had come to the throne. It will be seen below that on the silver coins, especially on the half-groat and lower denominations, it was the practice to make variety by the frequent displacing and replacing of the accessory symbols such as the mullet, annulet or broken annulet, and quatrefoil; I do not believe them to have had any political significance, I think that their use and disuse were ordered by the Master in order to produce the necessary varieties of privy marks.

the earlier issues, when variations of letters were the means of marking the coins, the same small varieties can be traced on coins of all denominations except the farthing.

With the nobles as the starting-point a description is given below of the varieties which I have been able to trace on them and on the other coins. A detailed list of the coins of each denomination, with the obverses and reverses separately described, is placed at the end of the paper, and the known combinations of obverse and reverse dies are also given, in order to enable the reader to ascertain to what extent the dies bearing different marks are muled with each other. For this purpose the dies are indicated by their group and class numbers followed by a number for an obverse die and a letter for a reverse die, thus $V(a)2 \times V(d)a$ is a coin with obverse die "2" of the class $V(a)$ united with reverse die "a" of class $V(d)$.

It is important in studying the lists to bear in mind that the last number (obverse) or letter (reverse) has no chronological value, it merely distinguishes one die from another and the dies themselves are not necessarily placed in order, indeed it would usually be impossible to do so. The group label is always a Roman numeral, and may be followed by a bracketed letter which subdivides the group into classes. Therefore, the Roman numeral and, if there is one, the bracketed letter give throughout all denominations the parallel issues, and they also serve to show, by a glance at the lists of combinations of dies, to what extent obverses correspond with their reverses, and whether they are muled with near or distant relatives; thus $V(a)5 \times V(a)\alpha$ indicates a coin which has identical

features on obverse and reverse, the features of class *a* of group V; whether the die-numbers are 5, 6, or 7 and *x*, *y*, or *z* is immaterial; similarly III 2 × IV *a* indicates an obverse with the characteristics of group III combined with a reverse having the characteristics of group IV. But III 2 must not be assumed to be later than III 1.

I have made drawings, which are reproduced at a scale of 3 to 1 on the accompanying table, in order that the details under discussion may be clearly conveyed to the reader and made possible to pick out on the coins photographed on the plates. The row of objects below the letter **h** is a further enlargement of varieties of the foot of **h**, nos. 3 and 4, showing the flaw in the foot and various methods of repairing it.

On some coins it is not possible to obtain the same minute detail as on others, and obverse and reverse dies do not always bear the same feature; to meet this difficulty the group of classes in which a coin may be placed is indicated when the actual class cannot be identified, thus the obverse dies of groats classified as V (*j-l*) have the broken **R** (no. 5) but, as the letter **P** does not occur on the obverse and there is only one **h**, it is not possible to say whether they correspond to *j*, *k* or *l*.

The earliest coins of Henry V, known colloquially as the "emaciated bust" issue, have on all denominations a uniform lettering which does not occur elsewhere; this lettering is short and broad, a few letters are illustrated for comparison (see no. 1 of letters **G**, **h**, **I**, **R**, **P**, and **S** on the Table). No symbols or emblems are inserted on the nobles of this issue, except the quatrefoil in one quarter of the reverse and a

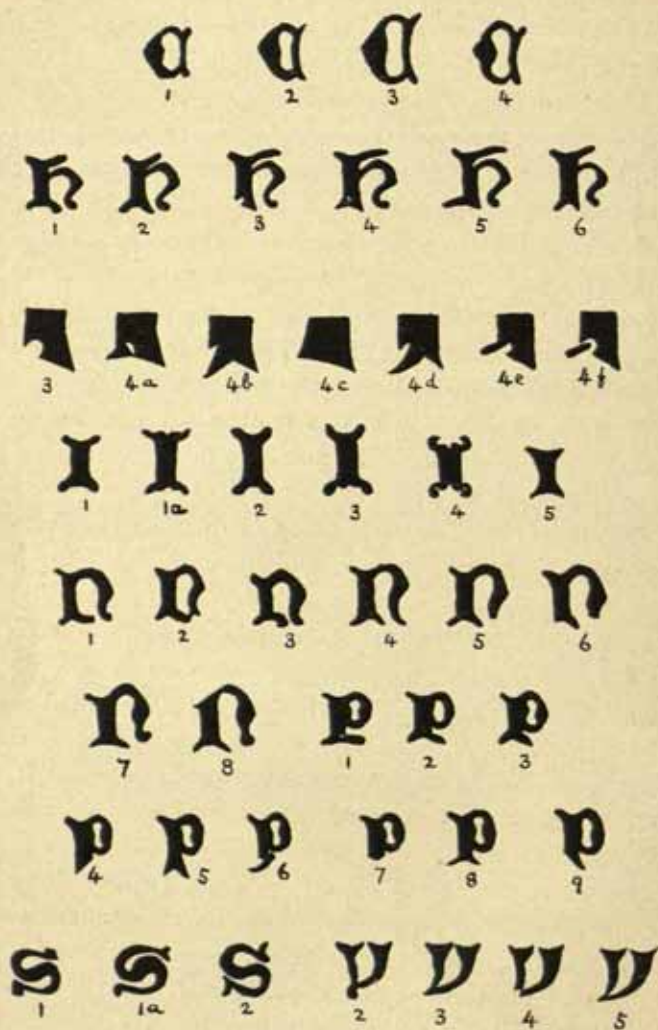


Table of Drawings.

saltire or a quatrefoil above the sail on the obverse, nor have I been able to find any special peculiarities in the individual letters on these coins.

Closely allied to the nobles of the "emaciated bust" series are some nobles that are no less rare (one from Bruun sale, lot 379, is in Mr. Lawrence's collection; another from the same obverse die was in the Horsted Keynes hoard, no. 7); these also have no symbols, other than the quatrefoil, on the obverse, but a new lettering is found on them which one may call the ordinary early lettering of Henry V, slightly taller and noticeably less broad than that on the preceding coins; this lettering (see **C 2**, **h 2**, **N 2**, **P 2**) is found also on similar nobles which have the annulet on the rudder, and on some which have the mullet by the sword-arm in addition to the annulet; but it has three peculiarities which do not recur, the forms of **I**, **M**, and **S** (illustrations of **I** and **S** on the Table are numbered 1*a*); the letter **I** has both top and bottom ornamentally finished in palmate form, **M** has on the left side a short limb lacking the ball foot, **S** is much higher waisted than on later coins. These letters are important in the identification of corresponding silver coins.

The nobles with annulet on the rudder have in a few cases the same peculiarities of lettering, but other specimens have the ordinary forms of **I**, **M**, **S** (numbered 2 on the Table); dies of this series were used later with a "mullet"⁷ punched on them, two dies are found both with and without the mullet.

⁷ The traditional name of this symbol is retained for convenience. On the earliest examples it is a cinquefoil with central pellet and slightly rounded foils; on later coins, though it has no marked centre, it has rounded ends to the foils and probably represents a flower rather than a star or mullet.

The next issue, mullet by wrist and annulet on rudder, has at first the same lettering (no. 2 on the Table). Careful note should be made of the letter **N** of this series; it is of a curious form with a small tag joining the tail to the foot, and at first sight it gives the erroneous impression that the tail is broken. But while the nobles still retain the same symbols, the mullet at wrist and annulet on rudder, large forms of the letters **Q**, **Θ**, and **I** are introduced (see **C 3** and **I 3** on the Table).⁸ Two obverses, **IV (b) 2**, form a link between **IV** and **V**; both have the broken annulet on the ship's side and **N** no. 2; one has also the annulet on the rudder.

In the long series which follows, and which is marked on the nobles by the mullet at wrist and broken annulet on ship's side, there are many characteristic peculiarities of lettering. On the earliest coins the same large **Q**, **Θ**, and **I** continue, and a new form of **N** appears which is short and broad (see Table, **N 3**). On the half-groat and halfpenny, which have smaller lettering, this form of **N** is almost of equal height with the rest of the legend. After this a taller **N** is used (no. 4), and is associated with a new form of **Q** which is of normal size and has a pronounced swelling in the centre of its back (see Table, **Q 4**; the letter **Θ** corresponds to it).

At the same time is introduced a mutilation of the letter **h**, the left corner of the foot being gouged out (**h** no. 3, and enlargement of foot, no. 3). Later coins have this flaw mended in various ways, usually by a wedge-shaped punch being stamped into the die (see

⁸ The letter **Θ** is not drawn on the Table as it always resembles **Q**.

h 4 and enlargements 4 *a* to 4 *f*); if carefully done the mending is not visible (as on variety 4 *c*). The repair is sometimes executed on the **h** in the word *Henric* and not on that in *Hyb*, but more often the flaw is repaired in both letters; on the reverse dies of nobles the **h** in *Ihc* is very rarely mended, the **h** in the centre of the coin is usually mended, sometimes both are mended and occasionally both unmended. At the same time as the flaw occurs in the letter **h** a break is made across the foot of **P** on reverse dies (**P** no. 4), and repairs of this letter (nos. 5 and 6 are examples) run on similar lines to those of the letter **h**.

In conjunction with the repaired forms of **h** and **P** there is also found a form of **Ń** with a broken tail (**Ń** 5), which is probably a deliberate point of difference. The contemporary flaws in the letters **h**, **Ń**, and **P** and their repairs produce a confusion which seems to defy explanation. As it was impossible to suggest any classification which would satisfy the claims of all the three letters to be treated as deliberate marks, I had recourse to a comparison of the condition of obverse dies of nobles which are found coupled with more than one reverse. Some of them have scratches, rust-marks, &c., which by their enlarged condition on one or more coins prove conclusively that the die was used later with one reverse than with another. Thus:

Obverse **V** (b) 1 is used earlier with **V** (a) *c* and **V** (b) *a* than with **V** (d) *c* and **V** (e) *b*.

V (b) 3 is used earlier with **V** (d) *b* than with **V** (f) *b* and **V** (g) *a*.

V (d) 1 is used first with **V** (e) *c*, later with **V** (g) *b* and **V** (g) *c*, and lastly with **V** (g) *d*.

V (d) 2 is used with **V** (f) *a*, **V** (h) *a* and **V** (j) *b* in that order.

V (*d*) 3 is used first with V (*g*) *e*, secondly with V (*g*) *f*, and lastly with V (*h*) *c*.

V (*k*, *l*) 1 is used with V (*j*) *a* and V (*k*) *a* earlier than with V (*l*) *b*.

V (*m*) 1 is used earlier with V (*l*) *c* than with V (*l*) *d*.

V (*s*) 1 is used earlier with V (*s*) *d* and V (*t*) *a* than with VI *a*.

The classification of the intricate series of groups V *c* to V *g*, which involves the breaks and repairs of **h** and **P** and the unbroken and broken **R**, is therefore based on these proofs of the earlier and later uses of a common obverse die. The results seem to show a double series, one with unbroken **R** (no. 4), the other with broken **R** (no. 5), in which the letter **h** was first flawed, then repaired in both words, then in one word only,⁹ while the letter **P** was first deprived of one side of its foot (no. 4), then repaired with a false foot (nos. 5 and 6) in the same way as the flaw in the letter **h** was repaired, and then deprived of the whole foot (no. 7), and finally replaced by a new **P** (no. 8) very similar to, but slightly larger than, its mutilated predecessor (no. 3). The best illustrations of these letters are Pl. III, no. V (*h*) *c* and Pl. V, no. V (*j-l*) 1 (**h** flawed), Pl. III, no. V (*d*) *b* and Pl. V, no. V (*k-m*) 3 (**h** repaired), Pl. III, no. V (*f*) *a* (**P** flawed), Pl. III, no. V (*h*) *c* (**P** doubly flawed).

Immediately after the new **P** supplants the mutilated letter there is a further marking of the letter **R**; it has the left side of the serif cut off and therefore has a blunt-footed appearance (no. 6); it may be noted that it always has the broken tail; this was therefore the latest form in use before a new style

⁹ It must be remembered that the flaw was made on the punch, and the repair done on the die.

of the letter was introduced (no. 7). The first introduction of the blunt-footed **R** occurs without other change, that is to say, it is accompanied by the mended **h**, **C** no. 4, **I** no. 3, &c.

The next change is the use of the letter **C** upside-down instead of **D**,¹⁰ always (so far as I know at present) associated with a change to a smaller and more ornamental form of the letter **I** (no. 4), and about the same time the new form of initial cross which has a large hollow centre is introduced. All earlier coins of this reign bear the characteristic cross with the sunk annulet in the centre.¹¹

After this, with the blunt-footed **R** still remaining but with **D** of normal form again,¹² a new form of **h** is introduced (no. 5), which is marked by a very long spur to the foot of the vertical stroke; this letter continues down to the annulet coinage; at the same time **y** has a different form, with long branches and short tail (no. 3), and the size of the letter **R** is slightly increased. The next and final change of lettering is the introduction of the form of **R** with short ball-tail (**R** 7). This brings us to the end of the "mullet and broken annulet" coinage.

At the time that the symbols in the field are varied (groups VI onwards) the minute variations of lettering

¹⁰ The difference is in the upright stroke, not in the curved back of the letter. The ordinary **D** has a broad, approximately straight, upright; **C** has a thin curved upright.

¹¹ A few coins, which I had classed separately as **V(n)**, appeared to have a plain cross, but duplicate specimens have in some cases revealed the sunk annulet, and I believe that its apparent absence is always due to a coin, die, or punch being worn down.

¹² Apparently the introduction of **h** no. 5 just preceded the return to the normal **D**. A reverse die of a noble, **V(r)a**, has **h** no. 5 and a reversed **C** for **D**.

are apparently almost at an end. A sharp cut removing the left foot of the letter **P** is introduced at this stage, and remains unaltered until the "annulet" coinage, on which a mullet and annulets take the place of the saltire stops, is introduced. **V** is also varied (no. 4) when the pellet at sword-point is introduced, and at the same time the letter **N** is slightly varied by a sharp cut across the top (**N** 8). At this point the privy marking of the coins seems to be removed from the lettering to the design of the coins, and a new system is introduced of combining in various ways the occasional symbols, the mullet, annulet, trefoil, and pellet, as may be seen in the detailed list of obverses of nobles which is given below. In classifying these nobles it is important to note the change from 3 and 2 ropes to 2 and 1 in the middle of the pellet-marked series (group VII). Finally all the occasional marks are removed from the field of the coin, and the stops changed to a mullet after the first word and annulets after the other words of the legend; at the same time a new form of **h** (no. 6) with fish-tail foot appears. A new **I** (no. 5) is also introduced, but only for the lower denominations, and on these it appears also on ordinary annulet coins of Henry VI; this **I** does not appear on the noble or the groat.

Other letter-changes that have not been specifically mentioned are the introduction in group V(a) of a larger **T** which continues from that time unchanged; the letter **M** with a slight flaw on the left elbow occurs from V(a) to V(t); the size of the letter **R** increases slightly in IV and again in V(t).

Below is appended a summary of the points of difference enumerated above:

- I. "Emaciated" bust with lettering No. 1.
- II. Lettering No. 2, but I, M, S No. 1 a.
- III. Lettering No. 2 with ordinary I, M, S.
- IV. Large G, E, and L.
- V (a). R No. 3.
- (b). Same, but hIB for hVB.
- (c). R 4, C 4, h 3, P 3 (not known, see below, p. 66).
- (d). R 4, C 4, h 4, P 3.
- (e). " " h 3 and h 4, P 3.
- (f). " " " P 4.
- (g). " " " P 5 and 6.
- (h). " " " P 7.
- (i). " " h 3, "
- (j). R 5, " " "
- (k). " " h 3 and 4, "
- (l). " " " P 8.
- (m). " " h 4, "
- (n). R 6, " " "
- (p). Reversed G for D, I 4.
- (q). " " initial cross with hollow centre.
- (r). " " h 5, V 3.
- (s). Ordinary D with I 4 and h 5.
- (t). R 7.
- VI. .•. by shield; * and O by wrist; O on ship.
P no. 9.
- VII (a). .•. by shield; O by wrist; O on ship; pellet at sword-point and on reverse.
- (b). .•. by shield; * and O by wrist; O on ship; pellet at sword-point and on reverse.

With ropes 2 and 1:—

- (c). .•. by shield; * and O by wrist; O on ship; pellet at sword-point and on reverse.
- (d). .•. by shield; * and O by wrist; .•. on ship; pellet at sword-point and on reverse.

VIII (a). $\bullet\bullet$ by shield; * by wrist; \circ on ship; $\bullet\bullet$ on reverse.

(b). $\bullet\bullet$ by shield; * and \circ by wrist; $\bullet\bullet$ on ship and on reverse.

IX. Mullet and annulets as stops. **R** no. 6.

Of the various marks the most satisfactory as a privy mark is the use (in *V p, q, r*) of the letter **Q** reversed instead of **D**; it is not due to the use of a faulty punch, nor, as it is known on every denomination except the quarter-noble and the farthing, can it possibly be due to an accident, which might well be the case had it been only a single occurrence. It is deliberately done, and all the dies which bear it are closely connected in point of time by their invariable use of the blunt-footed **R** (no. 6) and of **I** no. 4. It is the most suitable form of privy mark because it easily escapes observation and, if observed, appears to be accidental.

The two letters **h** and **P** are subjected to mutilation, and both in rather similar manner, namely the cutting off of a piece of the foot, but the mutilation of **h** is done with a gouge-shaped instrument and that of **P** by a straight cutting instrument; these mutilations are clearly done on the punch. But the most interesting feature is that in both cases it was found necessary to obliterate the flaw, and so the very curious forms were evolved which are illustrated on my table of drawings (enlargements of **h**, 4*a* to 4*f*, and **P** 4-7): the method of obliterating the flaw was to strike a small punch on the die itself over the flaw; the punches were of various shapes and often missed, or nearly missed, their mark.¹³ Later, in groups VI to VIII,

¹³ Mr. Lawrence has kindly drawn my attention to a similar case

the letter **P** again suffered mutilation (**P** 9) and was not repaired. The repairs of the mutilations cannot have been prompted by an aesthetic sense which was disturbed by the sight of the flaw; the repaired forms are certainly no less unsightly, nor would any one for this purpose have repaired one **h** and left the other mutilated on the same die. It is obvious that a series of privy marks was made by combinations of the flawed and repaired forms of the letters **h** and **P**. And at the same time a third factor was introduced by breaking the tail off the letter **R**. It is impossible to reconstruct with any certainty the complicated series of privy marks that was formed out of the three letters: I have arranged the dies of nobles on the basis of the earlier and later use of a die common to two or more reverses (see above, p. 55), but even so I am by no means certain how many intentional combinations were produced. Nor am I quite sure that the letter **R** was not also repaired; occasionally the tail of **R** (no. 4) seems a slight misfit, but this may be only due to wearing of the punch.

This repairing of the flaws brings us to the important question of the continued use of a privy mark after it had served its time. Mr. Lawrence has said that the broken forms of **G** and **Q** and the flaw in the letter **V** in the reign of Edward III cannot have been privy marks, because they were in use for a longer period than three months.¹⁴ He has overlooked the point

of the repairing of a mutilation in the reign of Richard II. The letter **D** has on some coins a hole pierced in the centre of its back, and on later coins the hole is filled up by cutting away the excrescence on the die, usually to too great a depth.

¹⁴ *Num. Chron.*, 1929, p. 108.

that there would be no necessity to remove a privy mark provided it did not interfere with the privy mark of the next quarter. The flaw in the letter **h** did interfere when they took the trouble to repair it. A glance down the list of marks given above shows that it was the regular practice to leave a mark after it had become obsolete; thus the large **Q**, **Θ**, and **I** in group IV must have been privy marks (perhaps separately, each marking three months, or, more probably, **Q** and **Θ**, which always seem to share the same fate, representing one quarter and **I** another); later the curious **Ŕ** of V(a) was used, but the large **Q**, **Θ**, and **I**, though certainly obsolete as privy marks, remained. Similarly in and after group V(m) the form of **h** with flaw mended continued on dies which were marked by a blunt-footed **Ŕ**, a new **I** (no. 4), and a reversed **Q** for **D**.

In carrying out the order to place a privy mark on the coins, the Master was faced by a very serious difficulty in discovering some means of marking his coins four times a year without putting himself to the expense of having new dies cut every three months. Many devices were used to avoid this expenditure. In the first place, the transference from time to time of the privy mark from obverse to reverse would enable dies to come back into use after short intervals of rest. We have already seen in the repaired flaws of **h** and **P** how an alteration on the die itself was made to serve as a privy mark. Similarly, when the symbol commonly known as the mullet, which on the earliest coins is a cinquefoil or flower, and later may be either a star or flower, was put on as a mark at the beginning of group V, it enabled the Master not only

to use dies of Henry V which he had previously put aside,¹⁵ but also to bring out dies of the previous reign which had long been inactive ;¹⁶ the most curious case of the use of an old die is the half-groat in the British Museum struck from die V (*d-i*) 2 and an early reverse die of Richard II.¹⁷

It is interesting to find how commonly the same letters are made to serve this purpose. In the reign of Edward III **C** and **E** are very frequently marked in different ways ; in Richard's reign it is easy to pick out both silver and gold coins on which a very large form of **C** and **E** or a form with a very angular back catches the eye ; in the early part of this reign these letters were again singled out for special treatment.

It is not surprising to find the marks on various denominations differing at certain periods ; if, for example, the letter **P** was used at one time for the privy mark, some other mark was necessary on the coins which did not bear that letter in their legends. Some such consideration was presumably the cause of the removal of the mullet from the groats and half-groats in the early stages of group V and its replacement later, though this symbol remained undisturbed on the gold ; similarly the quatrefoil in the obverse and reverse legends of silver coins is subject to fits of disappearance and reappearance.

¹⁵ Dies III (*a*) 2, III (*b*) 2 in the noble series and III 2, III 4 of the groats are known both with and without the mullet.

¹⁶ Dies of Henry IV marked with the mullet are known in groats, pennies, and halfpennies.

¹⁷ A duplicate specimen of this curious half-groat is in the Fitzwilliam Museum at Cambridge.

The variety of the use and disuse of these marks on the field of the coin is interesting to note. On the obverses of groats the mullet first appears in group IV, which includes old dies thus marked for revival; is omitted in V (a) except on one die; is present in V (j-l), the next group of which groats are known to me, and then remains till all symbols are removed in group IX. The quatrefoil after *Henric* is found on groats of group I, absent in group II, present on one die only of group III, omitted in group IV and on one die of group V (a), reappears in V (j-l) and in V (k-m), is omitted in V (s) and later groups.

The half-groat has the mullet first in group IV, omits it on the die which seems to be the earliest of V (a), omits it again in V (d-i), has it in V (j-m), omits it in V (q), has it on two dies and omits it on one of V (s), has it in VI and VIII. The annulet (unbroken) occurs, with pellet, on the half-groat of group IV, in V (a) it is a broken annulet (but omitted altogether on one die), it is broken in V (d-i), V (j-m), V (q), and V (s); two dies of group VI have no annulet, the third a broken annulet; VIII has an unbroken annulet. The quatrefoil after *Posui* on the reverse of groats and half-groats is found from group IV onwards (but the half-groat dies of group IV omit it) except on one die of group V (j, k) of each denomination.

I think it is reasonably safe to conclude that of the varieties that have here been enumerated many represent the Master's privy marks; how many privy marks are represented by these thirty odd varieties it is impossible to say, but, if allowance is made for a certain number that must have been overlooked, the varieties specified are very near the number

required, namely 38, for the nine and a half years of the reign.

These numbers cannot be used as a basis for identifying certain marks with certain years. This would require some such confirmation as the varying amount of coin shown by the mint accounts to have been struck at different periods; in this reign the mint accounts are lumped together in long periods, and they show, excepting some increase in both metals at the beginning and end of the reign, a very even rate of coinage. But it is satisfactory that the varieties come reasonably near the number required; they justify the conclusion that in this direction search must be made for the Master's privy marks.

OBVERSE DIES OF NOBLES.

Legend, unless otherwise stated, is

HERRIC DI GRÆ REX ANGL & FRANC DNR HYB

I. Lettering of "emaciated bust" group (no. 1 on Table). Either single or double saltire stops; a saltire or quatrefoil over the sail. [Pl. III.]

II. Lettering no. 2, but with peculiar forms (1*a*) of **I**, **M**, and **S**. No symbols except quatrefoil over sail.

III. Annulet on rudder.

(*a*). Same lettering as group II.

(*b*). Ordinary lettering (No. 2) throughout, **I**, **M**, and **S** are now No. 2. [Pl. III.]

IV. "Mullet" by wrist; transition from annulet on rudder to broken annulet on ship's side.

(*a*). Old dies converted by addition of a mullet. Three dies are known; two are known both with the mullet and without it; the other is only found with the mullet, but its lettering shows it to be a similar die converted.

- (b). Lettering as before, but with large **Q**, **Θ**, and **I** (**C** 3. **I** 3 on Table). One die has the annulet on the rudder, the other, **IV** (b) 2, has not. Both have the broken annulet on the ship's side. [**Pl. III.**]

V. Mullet by wrist, broken annulet on ship's side.

- (a). Small broad **Q** (no. 3), otherwise lettering as before with large **Q**, **Θ**, and **I**.
 (b). Same as preceding, but with **I** for **Y** in **hIB**. [**Pl. III.**]
 (c). With flaw in **h** (**h** 3), **Q** no. 4 and **Θ** corresponding; **Q** no. 4; otherwise as before. No dies at present known.¹⁸
 (d). **h** mended in both *Henric* and *Hyb* (**h** 4 and enlargements *a* to *f*), otherwise as preceding. [**Pl. III.**]
 (k, l). **h** mended in *Henric* but not mended in *Hyb*; **Q** broken (no. 5); other letters as before.
 (m). **h** mended in both words; **Q** broken. [**Pl. III.**]
 (o). Similar, but with blunt-footed **Q** (no. 6).
 (p). Similar lettering including blunt-footed **Q** and mended **h**; **I** no. 4; **Q** reversed for **D**. [**Pl. IV.**]
 (s). Ordinary **D**; similar blunt-footed **Q**; new **h** (no. 5) with long spur; **Y** no. 3.
 (t). Similar lettering, but new form of **Q** (no. 7).

VI. Trefoil by shield, broken annulet on ship's side, mullet and annulet by wrist. Lettering as preceding.

- VII (a). Pellet at sword-point; annulet, not broken, on ship's side and at sword-arm; trefoil by shield, no mullet. Lettering same, but **Y** no. 4 and **Q** (no. 8) with cut across top. This form of **Q** continues on nobles to the end of the reign.

¹⁸ This class is inserted, though no specimens are known, because the next class having the flaw mended in the letter **h** seems to imply the existence of a preceding class with the flaw unmended; on the arrangement of classes *c* to *m* see above, p. 56.

(b). As preceding, but with mullet at sword-arm.
[Pl. IV.]

(c). Ropes from now onward 2 and 1 (previously 3 and 2). Otherwise as VII b. [Pl. IV.]

(d). As VII c, but trefoil in place of annulet on ship's side.

VIII. No pellet at sword-point. Same lettering with R (no. 8) as before.

(a). Mullet only, no annulet, by wrist ; trefoil by shield ; annulet on ship's side.

(b). Mullet and annulet by wrist, trefoil by shield and on ship's side. [Pl. IV.]

IX. No marks in field (even the usual quatrefoil above the sail is removed). Mullet after first word, annulets after other words of legend. New form of R (no. 6) with fish-tail foot ; S (no. 5) with pointed tail : lettering otherwise as before, I no. 4 and R no. 8. [Pl. IV.]

REVERSE DIES OF NOBLES.

Legend is

†HIC AVTΘM TRWNSIENS PER MEDIV ILLORV
IBNT

I. Lettering of the "emaciated bust" group. Quatrefoil in upper right quarter. The initial cross on one die is similar to that on the coins of Henry IV ; on the other die, which has MΘDIVM, it has the sunk annulet in the centre. [Pl. III.]

II. Lettering No. 2, but with I, M, and S as no. 1 a on Table. Otherwise similar to preceding. Initial cross with sunk circle.

III. As before, but lettering No. 2 throughout.

IV. Large G, Θ, and I (Table G 3, I 3) ; P is also larger (P 3) ; the remainder no. 2 as before.
[Pl. III.]

V (a). R no. 3, otherwise as before with large G, Θ, I ; a larger form of T is used, and M has a flaw in the middle of the left limb, which continues to group V (s). [Pl. III.]

- (b). As preceding, but **h** in centre is prone.
- (c). With flaw in **h** (no. 3 on plate), **C** no. 4, **h** 4, **P** 3. None known.
- (d). With flaw in **h** mended both in *Ihc* and in central compartment; **h** 4, **P** 3. [Pl. III.]
- (e). **h** in central compartment with flaw mended, **h** in *Ihc* unmended; **h** 4, **P** 3.
- (f). Same, but **P** with flaw in foot cut upwards from l. to r. (**P** 4). [Pl. III.]
- (g). Same, but with flaw in **P** mended (**P** 5 and 6).
- (h). Same, but with double-flawed **P** (no. 7), i.e. both sides of foot broken off. [Pl. III.]
- (i). Same double-flawed **P**, **h** 4, **h** with flaw (no. 3) in both cases. [Pl. III.]
- (j). Same **P** and **h** (both flawed), **h** with broken tail (no. 5).
- (k). Same **P** and **h** (broken), **h** mended in the central compartment but not mended in *Ihc*.
- (l). Same broken **h**, new large **P** (no. 8); **h** as before (mended in central compartment only). All except one have initial cross apparently without the sunk annulet in centre.
- (p). **C** reversed for **D**; otherwise as preceding, but **h** is blunt-footed (no. 6); **h** both mended; initial cross with sunk annulet.
- (q). As preceding, but initial cross with hollow centre; **I** no. 4. [Pl. III.]
- (r). As preceding, but **h** with long-spurred foot (no. 5).
- (s). As preceding, with **h** no. 5 and blunt-footed **h** (no. 6); but ordinary **D**. [Pl. IV.]
- (t). Similar, but new form of **h** (no. 7).

VI. As preceding, but the letter **P** has left foot cut off (no. 9). [Pl. IV.]

VII. Pellet in upper left quarter, in addition to the usual quatrefoil in upper right. Lettering as in VI, except **h** which has cut across top (no. 8); this form of **h** continues to the end of the reign. [Pl. IV.]

VIII. Trefoil, instead of pellet, in upper left quarter; otherwise as preceding, with R no. 8.

IX. Mullet after first word, annulet after other words of legend; no marks in field (even the quatrefoil is now removed). Lettering as before, I no. 4, R no. 8, P with broken foot (no. 9). [Pl. IV.]

The die combinations of Nobles are:—

(Coins which have no indication of ownership are in the British Museum.)

I 1 × I a.

I 2 × I b.

I 3 × I b.

II 1 × II a (LAL); II b.

III (a) 1 × II c (RCL).

III (a) 2 × II c (Mann 228); with mullet added × III c (see below).

III (b) 1 × dies of Henry IV (Coats, Marno, Baldwin).

III (b) 2 × III a; III b; with mullet added × III c; IV a; IV c (see below).

III (a) 2 (with mullet added) × III c (PCB). Group IV (a),

III (b) 2 (with mullet added) × III c; IV a; old dies with

IV c (PCB). mullet added

IV (a) 1 × III d (RCL). at wrist.

IV (b) 1 × IV b.

IV (b) 2 × V (a) a.

V (a) 1 × V (a) b (Spink); V (e) a.

V (a) 2 × V (d) a (Baldwin).

V (b) 1 × V (a) c (Baldwin); V (b) a; V (d) c; V (e) b.

V (b) 2 × V (a) d (Baldwin).

V (b) 3 × V (d) b; V (f) b; V (g) a.

V (d) 1 × V (e) c; V (g) b; V (g) c; V (g) d.

V (d) 2 × V (f) a; V (h) a; V (j) b.

V (d) 3 × V (g) e; V (g) f; V (h) c.

V (d) 4 × V (h) b (RCL).

V (d) 5 × V (i) a; V (l) a (LAL).

V (k, l) 1 × V (j) a; V (k) a; V (l) b.

V (k, l) 2 × V (p) a.

V (m) 1 × V (l) c; V (l) d.

V (m) 2 × V (l) e.

V (m) 3 × V (l) f.

V (m) 4 × V (q) a; V (r) a; V (s) a (Spink).

V (o) 1 × V (q) b (Spink).

V (o) 2 × V (s) b.

- V (p) 1 × V (s) c.
 V (s) 1 × V (s) d (Bruun 380); V (t) a; VI a (Baldwin).
 V (t) 1 × V (t) b.
 VI 1 × V (t) c (Spink).
 VI 2 × V (t) d (Baldwin); V (t) e (Baldwin).
 VI 3 × VI b.
 VI 4 × VI c.
 VII (a) 1 × VII a (Dee).
 VII (b) 1 × VI d.
 VII (b) 2 × VI e.
 VII (b) 3 × VI f (Spink); VII b (Walters 270).
 VII (c) 1 × VII c.
 VII (c) 2 × VII d; VII e (RCL); VIII a.
 VII (c) 3 × VII f (Spink).
 VII (c) 4 × VII g (Baldwin).
 VII (c) 5 × VIII b (Bruun 385).
 VII (c) 6 × VIII c (Spink).
 VII (d) 1 × VIII d (RCL).
 VIII (a) 1 × VIII e.
 VIII (b) 1 × VIII f (PCB).
 VIII (b) 2 × IX a.
 VIII (b) 3 × die of Henry VI.
 IX 1 × VIII f; IX b (RCL).
 IX 2 × IX a.
 IX 3 × die of Henry VI.

OBVERSE DIES OF HALF-NOBLES.

None known corresponding to classes I, II, and III of the nobles.

- IV. Broken annulet on ship's side, no mullet, quatrefoil before *Henric*. Large G, H, and I, lettering otherwise as no. 2 throughout.

Legend

hENRIC:DI:GRAN:REX:ANGL:FRAN:HY

[Pl. IV.]

- V. Mullet over shield, broken annulet on ship's side, no quatrefoil.

(a). R no. 3, lettering otherwise as preceding. Legend ends FR:DN:HYB.

(e-h). R no. 4; R mended (no. 4) in *Henric*, with flaw unmended in *Hyb* (no. 3); G no. 4; I no. 3. Legend as preceding. [Pl. IV.]

(m). **Ń** broken (no. 5); **h** mended in both words. Quatrefoil after *Hyb* or before *Henric*. Same legend. One die **V**(m)2 has **h** 5 in *Henric* and **h** 3 in *Hyb*.

(s). **Ń** blunt-footed (no. 6); **h** no. 5; **I** no. 4; **ŷ** no. 3. Quatrefoil as before. Legend ends **RR:hŷB**.

VIII. Ropes 2 and 1 (previously 3 and 2); mullet over shield; trefoil between shield and prow; no annulet. **ŷ** no. 4, but **Ń** no. 7. Legend ending **R:DN:hŷ**.

Similar, but without trefoil (Ropes 2 and 1 and **ŷ** no. 4 prevent this being placed as Class VI). [Pl. IV.]

Legend ending **R:D:hŷ** or **R:DS:hŷ**.

IX. No symbols in field; mullet after first word, annulet after others, but saltire either side of **ŷ**; quatrefoil above sail. **I** no. 4.

Legend is

hERRIC:DI:GR:RAX:ANGL:ŷ:RR'

The letter **Ń** has the cut across the top (no. 8) on two dies, on a third die this letter is doubtful. [Pl. IV.]

REVERSE DIES OF HALF-NOBLES.

(Note.—The letter **h** in the centre of Half-Nobles is made from a special punch and does not vary throughout the reign.)

V (a). **Ń** no. 3 and large **I** and **Œ**. Broken annulet in upper right quarter.

Legend is

DOMINE:RE:IN:FVROR:TVO:NRGVKS:MŒ

One die omits the initial cross. [Pl. IV.]

(d-i). **Ń** no. 4, large **I** (no. 3). Broken annulet in upper right quarter. [Pl. IV.]

(g). **Œ** reversed for **D**; **Ń** blunt-footed (no. 6). Initial cross with hollow centre; **I** no. 4.

(s). Similar, but with ordinary **D**.

(t). Similar, but with **Ń** no. 7.

VI.? Similar, but with annulet in upper right quarter unbroken.

VII. Similar, but with pellet in upper left quarter, in addition to annulet, unbroken, in upper right quarter. One, VII *a*, has no trefoils in spandrels; another, VII *c*, omits the initial cross. [Pl. IV.]

IX. No symbols; mullet and annulets as stops.

(*a*). Lettering as before. Dies *a* and *b* read I for **IN**, die *c* **IN** for **IN**. [Pl. IV.]

(*b*). New form of I, no. 5. Annulet for mullet after *Domine*.

The die combinations of Half-Nobles are:—

IV 1 × V (*a*) *a* (BM).

V (*a*) 1 × V (*a*) *b* (BM).

V (*a*) 2 × V (*a*) *c* (RCL).

V (*e-h*) 1 × V (*d-i*) *a* (BM).

V (*e-h*) 2 × V (*d-i*) *b* (BM).

V (*m*) 1 × V (*q*) *a* (BM).

V (*m*?) 2 × V (*q*) *b* (Marno).

V (*s*) 1 × V (*s*) *a* (RCL).

V (*s*) 2 × V (*t*) *b* (Mann 233).

VIII 1 × VI *a* (RCL); VII *a* (BM).

VIII 2 × VII *b* (BM).

VIII 3 × VII *c* (Bruun 389).

IX 1 × IX (*a*) *c* (BM).

IX 2 × IX (*a*) *a* (RCL).

IX 3 × IX (*a*) *a* (BM); IX (*a*) *b* (TCT); IX (*b*) *a* (BM); die of Henry VI (BM).

OBVERSE DIES OF QUARTER-NOBLES.

- I. Early lettering (no. 1). Lis above, quatrefoil and annulet each side of shield. Initial cross with sunk annulet.

Legend **†HENRICVS DEI GRATIA REX ANGLIE**

On this and the following coin large trefoils are placed on the points of the tressure. [Pl. V.]

IV. Legend and marks in field as on coin of group I; lettering no. 2, but with large **C**, **H**, and **I** (no. 3). Another die, IV 2, has a mullet below shield to r., omits the annulets beside the shield, but has annulets instead of trefoils on the tressure. [Pl. V.]

V (a). **R** no. 3, large **C**, **H**, and **I**. Lis above, broken annulet l., mullet r.

Legend ***HENRIC:REX:ANGL:FRANC** [Pl. V.]

(s). **R** broken and blunt-footed (no. 6); spurred **H** (no. 5); **I** no. 4. Lis above, annulet (not broken) l., mullet r. Legend as before. Initial cross with hollow centre.

VIII.? **R** with cut top (no. 8); spurred **H** (no. 5). Lis above, trefoil l., mullet r. **FRANC** or **FRAN**. [Pl. V.]

IX. No symbols in field except lis over shield. Mullet and annulets as stops. **R** has not the cut top.

Legend ***HENRIC:DEI:GRAT:REX:ANGL**
One die reads **DI** for **DEI**. [Pl. V.]

REVERSE DIES OF QUARTER-NOBLES.

I. Early lettering (no. 1); stars in place of trefoils at angles of central panel. Initial cross with sunk annulet.

***EXULTABITVR:IN:GLORIA** [Pl. V.]

III. Lettering no. 2 throughout; trefoils at angles of central panel

IV. Same as preceding, but large **H** and **I** (no. 3). [Pl. V.]

V (a). As preceding, but with **R** no. 3.

V (d-i). Similar, but with **R** no. 4. [Pl. V.]

V (r, s). Blunt-footed **R** (no. 6); spurred **H** (no. 5); **I** no. 4.

VI. **I** no. 4, **R** no. 7. No additional symbols.

VIII.? Similar, but reading **EXCVLTABITVR**. **R** with cut across top (No. 8). [Pl. V.]

One die, VIII a, which seems otherwise identical with this group reads **EXULTABITVR**.

IX. Mullet after first, annulet after second word.

(a). Lettering as before with I no. 4.

(b). With new form of I (no. 5). [Pl. V.]

The die combinations of Quarter-Nobles are :—

I 1 × I a (BM).

IV 1 × die of Henry IV (PCB).

IV 2 × III a (RCL); IV a (BM).

V (a) 1 × IV b (Bruun 392); V (a) a (Fitzwilliam); V (d-i) a (BM); V (d-i) b (BM); V (d-i) c (BM); V (d-i) d (RCL?).

V (s) 1 × V (s) a (PCB).

V (s) 2 × VI a (BM); VIII b (RCL).

VIII 1 × VIII c (BM); VIII d (BM).

VIII 2 × VIII e (BM).

VIII 3 × VIII a (RCL); VIII f (RCL).

IX 1 × IX (a) a (Marno); IX (a) b (RCL).

IX 2 × IX (b) a (BM); IX (b) b (TCT); die of Henry VI (RCL).

OBVERSE DIES OF GROATS.

I. Early lettering (no. 1). "Emaciated" bust. Quatrefoil after *Henric*. All arches fleured. Initial cross with sunk annulet.

*HENRIC·DI·GRAN·REX·ANGLIE·X·FRANCO
[Pl. V.]

II. Lettering no. 2, but I no. 1 a. Ordinary bust. Same legend, but single or double saltire stops. Arches all fleured on dies II 1, II 2: arches not fleured over crown on die II 3 (no quatrefoil after *Henric*), which has a small I in DI. [Pl. V.]

III. Lettering no. 2 throughout. Tressures over the crown not fleured. Dies III 3, III 5 and III 6 have quatrefoil after *Henric*. [Pl. V.]

IV (a). Dies of Class III converted by addition of mullet (cinquefoil) on r. shoulder. Four dies known, two of which (III 2 and III 4) are known both with and without the mullet.
[Pl. V.]

(b). Large Q, G, and I (no. 3). No quatrefoil.

Mullet on breast

die IV 1 (RNGLIET·X·RRTRN')

Mullet on r. shoulder

die IV 2 (RNGLIET·X·RRTRND')

IV 3 and IV 4 (RNGLIET·X·RRTRND')

V (a). Lettering as preceding, but new form of R (no. 3). RNGLIET·X·RRTRND

No mullet. Quatrefoil after *Henric* except on die V (a) 1. [Pl. V.]

V (a) 5 has mullet on shoulder, no fleur on breast.

(j-l). R broken (no. 5), R with flaw (no. 3). Same legend. [Pl. V.]

Mullet on r. shoulder. Quatrefoil after *Henric*.

(k-m). R broken (no. 5), R mended (no. 4). Same legend. Mullet and quatrefoil as before. [Pl. V.]

(s). Blunt-footed R (no. 6); R no. 5; I no. 4. Mullet as before. No quatrefoil. Same legend. [Pl. VI.]

One die reads RRTRNDG.

VI. New form of R (no. 7). Otherwise as before. [Pl. VI.]

VIII.? Similar, but with R cut across top (no. 8).

RNGLIET·X·RRTRNDG (*sic*). [Pl. VI.]

IX.? No mullet; otherwise similar, and with R no. 8.

REVERSE DIES OF GROATS.

I. Early lettering (no 1). Quatrefoil or saltire? after *Posui*. [Pl. V.]

II. Lettering no. 2 except I, M, S, which are 1 a. No quatrefoil. [Pl. V.]

III. Lettering no. 2 throughout. No quatrefoil, sometimes a saltire or double saltire after *Posui*. Saltires after *tas* 1, 2, or none. [Pl. V.]

IV. Large Q, G, and I. Quatrefoil or saltire after *Posui*: this is in regular use on groats from this group onwards. [Pl. V.]

V. (a). **R** no. 3, lettering otherwise as on preceding.

[Pl. V.]

One die, V (a) *b*, reads **ÆDIVTO/Rz**.

(c-e). **R** no. 4, **P** no. 3 (neither broken).

(h, i). Similar, but **P** with double flaw (no. 7).

These two coins, classified as IV 4 × V (h, i) *b* and V (a) 1 × V (h, i) *a*, are somewhat uncertain; possibly the **P** is mended on both coins, in which case they should be in group V (g).

(j, k). **R** broken (no. 5), and **P** broken as preceding.

Die V (j, k) *b* has **Y** for **V** in *Meum*; V (j, k) *c* omits the quatrefoil after *Posui*. [Pl. V.]

(l, m). Similar, but new large **P** (no. 8).

It is uncertain whether the initial cross is plain or with sunk annulet; on one coin (Mr. F. A. Walters) it certainly has the sunk annulet.

(q, r). Blunt-footed **R** (no. 6), **I** no. 4. Initial cross with hollow centre. **Q** reversed for **D**.

[Pl. V.]

(s). As preceding, but with ordinary **D**. [Pl. VI.]

(t). New form of **R** (no. 7), otherwise as preceding.

[Pl. VI.]

VI. Similar to preceding, but **P** with foot cut (no. 9).

VIII. Similar, but **R** with cut across top (no. 8). [Pl. VI.]

The die combinations of Groats are:—

Die of Henry IV × I *b* (BM); I *c* (Fox); I *d* (LAL); I *e* (LAL); I *f* (Bruun 376); III *a* (BM); III *e* (FAW).

Die of Henry IV (with mullet added) × III *f* (see below).

I 1 × die of Henry IV (BM, RCL); I *c* (Walters 245, Fox).

I 2 × I *a* (FAW, RCL); II *a* (FAW); III *b* (BM, Fox);

III *l* (RCL); V (c-e) *d* (Bruun 375).

II 1 × III *f* (Walters 259).

II 2 × II *a* (Fox); III *h* (Walters 246); III *i* (FAW); III *j* (RCL).

II 3 × II *a* (FAW); II *b* (Walters 249); II *c* (Fox); III *d* (BM); III *f* (RCL).

III 1 × II *a* (LAL).

III 2 × III *b* (Fox); III *g* (RCL); III *k* (Fox); with mullet added × III *l* (see below).

- III 3 \times III *i* (BM).
 III 4 \times III *c* (BM); with mullet added \times IV *f* (see below).
 Die of Henry IV (with mullet added) \times III *f* (RCL).
 III 2 (with mullet added) \times III *l* (Fox).
 III 4 (with mullet added) \times IV *b* (BM); IV *f* (Fox).
 III 5 (mullet) \times III *k* (RCL).
 III 6 (mullet) \times IV *b* (RCL).
 IV 1 \times IV *a* (BM, FAW); V (*a*) *a* (LAL); V (*a*) *b* (BM, FAW); V (*a*) *c* (FAW); V (*a*) *f* (Fox).
 IV 2 \times IV *c* (BM); IV *d* (BM).
 IV 3 \times IV *e* (LAL).
 IV 4 \times die of Henry IV (LAL and unknown owner); V (*a*) *c* (BM); V (*a*) *d* (BM); V (*h, i*) *b* (LAL); V (*j, k*) *b* (LAL).
 V (*a*) 1 \times V (*a*) *e* (BM); V (*a*) *g* (Fox); V (*a*) *h* (Fox); V (*h, i*) *a* (LAL).
 V (*a*) 2 \times V (*a*) *f* (BM).
 V (*a*) 3 \times V (*c-e*) *a* (LAL).
 V (*a*) 4 \times V (*c-e*) *b* (LAL); V (*c-e*) *c* (BM); V (*j, k*) *a* (LAL).
 V (*a*) 5 \times V (*a*) *i* (Fox).
 V (*j-l*) 1 \times V (*l, m*) *a* (BM); V (*l, m*) *d* (Fox).
 V (*k-m*) 1 \times V (*h, i*) *c* (LAL).
 V (*k-m*) 2 \times V (*h, i*) *d* (BM).
 V (*k-m*) 3 \times V (*j, k*) *c* (BM).
 V (*k-m*) 4 \times V (*l, m*) *b* (LAL).
 V (*k-m*) 5 \times V (*l, m*) *c* (BM).
 V (*k-m*) 6 \times V (*g, r*) *a* (BM); V (*s*) *a* (LAL); V (*s*) *f* (RCL); V (*s*) *g* (Fox).
 V (*k-m*) 7 \times V (*g, r*) *b* (BM).
 V (*s*) 1 \times V (*s*) *b* (LAL).
 V (*s*) 2 \times V (*s*) *c* (BM).
 V (*s*) 3 \times V (*s*) *d* (LAL).
 V (*s*) 4 \times V (*s*) *f* (BM).
 V (*s*) 5 \times V (*s*) *g* (Fox); V (*s*) *h* (Fox).
 VI 1 \times V (*t*) *a* (BM).
 VI 2 \times V (*t*) *b* (BM, RCL).
 VI 3 \times V (*t*) *c* (LAL).
 VI- \times VI- (a large number of dies).
 VIII 1 \times VI- (BM); VIII *a* (BM); VIII *b* (BM).
 IX 1 \times VIII *c* (BM); VIII *d* (BM).

OBVERSES OF HALF-GROATS.

- I. Early lettering. "Emaciated" bust. Nine arches to tressure, two above crown not fleured.

I 1 has annulet to l., pellet to r. of crown.

✠HENRIC:D'I:GRN:REX:ANGLI:R:

[Pl. VI.]

I 2 omits annulet and pellet and reads

✠HENRIC:DI:GRN:REX:ANGLI:R:

- III. Lettering no. 2 throughout. The crown and the bust of the portrait are similar to group I, but the features of the face are changed. No mullet; no annulet, legend, ends ANGLI:R:. Ten arches to tressure, two above crown not fleured. [Pl. VI.]

- IV. Similar to preceding (same composite portrait) with large Q, G, and I (no. 3). Mullet on breast. Annulet to l. of crown, pellet to r. adjoining the spike of the trefoil. Legend as on group III.

V (a). R no. 3 and large Q, G, and I.¹⁹ The ordinary portrait (tall neck with egg-shaped swelling) is now introduced and the ordinary high narrow crown. Legend ends ANGLI:R:. Mullet on breast on dies 2 and 3, not on 1 and 4. Broken annulet l. of crown. There are eleven or twelve arches to the tressure, those over the crown are fleured except on die V (a) 3. [Pl. VI.] But V (a) 4, which is clearly the earliest die,²⁰ retains the old lower crown; it has no mullet and no annulet or broken annulet.

(d-i). R no. 4; R with flaw mended. No mullet. Broken annulet l. of crown.

¹⁹ On dies V (a) 1 and V (a) 2 the letter I is fish-tailed at top and bottom, instead of the usual form. V (a) 4 and V (a) 2 have the smaller Q and G (No. 2 or No. 4?).

²⁰ I regret the confusion that may arise from the use of numbers for individual dies. I must repeat that the die-number has no chronological significance. It was impossible, without grave risk of error, to renumber all the dies in order to place them chronologically; and, of course, in most cases there is no evidence of the order of individual dies.

- V (*d-i*) 1 has eleven arches, those over the crown fleured [Pl. VI.]; V (*d-1*) 2 has twelve arches, those over the crown not fleured.
- (*j-m*). R no. 5 (with broken tail); R with flaw unmended. Mullet on breast. Broken annulet l. of crown. Tressure has eleven arches (as on all remaining dies except V (*s*) 2), with those above crown not fleured. [Pl. VI.]
- (*g*). R no. 6 (blunt-footed); R with flaw mended; reversed C in place of D; I No. 4. No mullet. Broken annulet l. of crown. Arches of tressure above crown are fleured.
- (*s*). Spurred R (no. 5); initial cross with hollow centre; other letters as in V (*g*). A new portrait is now introduced (shorter neck, spread shoulders).
- V (*s*) 1 has mullet on breast and broken annulet to l. of crown. Legend ends RR.
- V (*s*) 2 has mullet and broken annulet. Only ten arches to tressure. Legend ends R. [Pl. VI.]
- V (*s*) 3 has no mullet, but has a broken annulet both sides of the crown. Legend ends $\overline{\text{R}}\overline{\text{R}}\overline{\text{G}}\overline{\text{L}}\overline{\text{I}}\overline{\text{E}}\overline{\text{X}}\overline{\text{R}}$.
- VI. New form of R, no. 7.²¹ Mullet on breast. Dies VI 1 and VI 2 have no annulet, VI 3 has a broken annulet to l. of the crown. $\overline{\text{R}}\overline{\text{R}}\overline{\text{G}}\overline{\text{L}}\overline{\text{I}}\overline{\text{E}}$ (or $\overline{\text{R}}\overline{\text{R}}\overline{\text{G}}\overline{\text{L}}\overline{\text{I}}\overline{\text{E}}\overline{\text{X}}\overline{\text{R}}$). [Pl. VI.]
- VIII. Mullet on breast. Annulet, not broken, to l. of crown, trefoil to r. $\overline{\text{R}}\overline{\text{R}}\overline{\text{G}}\overline{\text{L}}\overline{\text{I}}\overline{\text{E}}\overline{\text{X}}\overline{\text{R}}$. [Pl. VI.]
- IX (*a*). New portrait with hollowed neck and armpits. No marks in field. Legend ends $\overline{\text{R}}\overline{\text{R}}\overline{\text{G}}\overline{\text{L}}\overline{\text{I}}\overline{\text{E}}\overline{\text{X}}\overline{\text{R}}$ (or RR).
- (*b*). Similar, with late form of I, no. 5.

REVERSES OF HALF-GROATS.

I. Early lettering (no. 1). Two dies.

I *b*, which is perhaps the earlier, reads POSVI/
DEVM R/DIVTO/REMEV.

²¹ The top of the letter R is visible on only one specimen that I have seen (die VI 3), and then it has not the cut across the top. It is not visible on any of group VIII that I have seen.

I a reads **POSVI**·/DEVꝛ·**Π**/DIVTO/REꝛ·**ME**. which is the usual reading on later coins²², though the positions of stops (saltires) are almost infinitely varied.

II. Lettering no. 2 except **I**, **M**, **S** (no. 1 a). No saltire or quatrefoil after *Posui*. [Pl. VI.]

III. Lettering no. 2 throughout, otherwise as preceding. [Pl. VI.]

IV. Similar, but with large **Q** and **I** (no. 3); the old smaller form of **Θ** (no. 2) continues on both dies of the half-groat that I have seen of this group.

V (a). **Q** no. 3, large **Q**, **Θ**, and **I** (no. 3). The quatrefoil appears after *Posui* [Pl. VI.] for the first time, and is always found on later dies, except V (j, k) a.

V (a) a seems to have **Q** no. 4 instead of the large **Q** (no. 3).

V (a) b has an initial cross and has **Q** for **Θ** in *Meu*.

(c-e). **Q** no. 4; **Q** and **Θ** no. 4.

(f). Similar, but with **P** no. 4 (with cut across foot upwards from left to right).

(j, k). **Q** no. 5 (with broken tail); **P** no. 7 (both sides of foot cut off). [Pl. VI.]

V (j, k) a has an initial cross and omits the quatrefoil after *Posui*.

(l, m). As before, but with new form (no. 8) of **P**. [Pl. VI.]

V (l, m) c reads **LORDEN**.

(p). **Q** no. 6 (blunt-footed); reversed **Q** in place of **D**.

(q). As preceding (with reversed **Q** for **D**), but with new **I** (no. 4).

(t). New form of **Q** (no. 7); ordinary **D**. [Pl. VI.]

VI. **P** no. 9, with cut across foot upwards right to left. [Pl. VI.]

IX (a). Pellets placed wide apart and not of angular (propeller) shape; new **P** (no cut across foot) as on coins of Henry VI; lettering otherwise as before.

²². **MEVME** on IV a and V (a) c; **MEV** on IV b, V (a) a, V (a) b, V (c-e) a, V (c-e) b, V (f) a, V (j, k) a, V (l, m) c; **M** on VI c.

(b). Similar, but with new form (no. 5) of the letter I.
[Pl. VI.]

The die-combinations of Half-Groats are:—

- Die of Henry IV \times III *a* (BM).
 I 1 \times I *a* (Fox, RCL); II *a* (BM).
 I 2 \times I *b* (Fox).
 III 1 \times III *b* (BM, Fox).
 IV 1 \times IV *a* (Fox).
 V (*a*) 1 \times IV *a* (BM); V (*a*) *a* (BM); V (*c-e*) *a* (FAW);
 V (*c-e*) *b* (Fox).
 V (*a*) 4 \times IV *b* (Fox).
 V (*a*) 2 \times V (*a*) *b* (BM, Fox).
 V (*a*) 3 \times V (*a*) *c* (BM); V (*a*) *d* (Fox).
 V (*d-i*) 1 \times V (*j, k*) *a* (BM); V (*j, k*) *b* (BM); V (*l, m*) *a*
 (Fox, RCL).
 V (*d-i*) 2 \times die of Richard II (BM, Fitzwilliam Mus.);
 V (*f*) *a* (BM); V (*l, m*) *b* (FAW).
 V (*j-m*) 1 \times V (*l, m*) *b* (BM); (*l, m*) *c* (RCL); V (*p*) *a* (BM);
 V (*q*) *b* (BM).
 V (*q*) 1 \times V (*q*) *a* (BM).
 V (*s*) 1 \times V (*t*) *a* (BM); V (*t*) *b* (BM); V (*t*) *c* (BM, Fox);
 V (*t*) *h* (Fox); V (*t*) *i* (Fox).
 V (*s*) 2 \times V (*t*) *d* (BM); V (*t*) *e* (BM); V (*t*) *f* (BM).
 V (*s*) 3 \times V (*t*) *g* (BM).
 VI 1 \times VI *a* (BM).
 VI 2 \times VI *b* (BM); VI *h* (Fox).
 VI 3 \times VI *c* (BM).
 VIII 1 \times VI *d* (BM); VI *e* (BM, Fox); VI *f* (BM); VI *i* (Fox).
 IX (*a*) 1 \times IX (*a*) *a* (BM); IX (*a*) *c* (Fox).
 IX (*a*) 2 \times IX (*a*) *b* (BM); IX (*b*) *a* (BM); IX (*b*) *b* (BM).
 IX (*a*) 3 \times IX (*a*) *f* (Fox).
 IX (*a*) 4 \times die of Henry VI (Fox).
 IX (*b*) 1 \times die of Henry VI (RCL).

PENNIES.

The pennies are numerous and their condition usually poor. I have not therefore noted the dies of pennies and smaller denominations, but I have described below the groups that I have been able to identify.

London Pennies.

- I. "Emaciated" bust; lettering no. 1. Annulet to l., pellet to r. of crown. *HENRIC·DI·GRAN·
 REX·ANGL, or ANG. The reverse has the

groups of pellets set closely together and the pellets are round; there is an annulet before *Lon*. [Pl. VII. BM]. The obverse (reading $\overline{\text{N}}\overline{\text{R}}\overline{\text{G}}$) is also found (Fox) with a mullet punched over the pellet to r. of the crown, combined with a reverse which has $\overline{\text{N}}$ no. 2 and therefore belongs to group II, III, or IV (the important letters CIVI are broken off the coin).

- V (a). Portrait has tall neck with egg-shaped swelling. $\overline{\text{N}}$ no. 3. The letter $\overline{\text{I}}$ is of fish-tail shape at top and bottom (cf. half-groat dies V (a) 1 and V (a) 2). Mullet l., broken annulet r. of crown. $\star \text{h} \overline{\text{E}} \overline{\text{N}} \overline{\text{R}} \overline{\text{I}} \overline{\text{C}} \overline{\text{I}} \overline{\text{R}} \overline{\text{E}} \overline{\text{X}} \star \overline{\text{N}} \overline{\text{R}} \overline{\text{G}} \overline{\text{L}} \overline{\text{I}} \overline{\text{E}} \star \overline{\text{X}} \star \overline{\text{R}} \overline{\text{R}} \overline{\text{N}} \overline{\text{R}} \overline{\text{D}}$. It is found with a corresponding reverse with $\overline{\text{N}}$ no. 3 and fish-tail $\overline{\text{I}}$, which has double saltires after *tas* and *don* [Pl. VII. LAL], and also (Fox) with a reverse having $\overline{\text{N}}$ no. 4, i.e. of group V (d-i).

- (d-i). Portrait with smaller face and larger body. $\overline{\text{h}}$ with flaw (no. 3), $\overline{\text{I}}$ no. 3, $\overline{\text{G}}$ no. 4, $\overline{\text{N}}$ no. 4. Mullet l., broken annulet r. Similar legend but $\overline{\text{R}} \overline{\text{R}} \overline{\text{N}} \overline{\text{R}}$. [Pl. VII. RCL.] Its corresponding reverse has propeller-shaped pellets, and so has the reverse V (j-m), with which it is also combined, and which is distinguished by the broken $\overline{\text{N}}$, no. 5.

This latter reverse, V (j-m), is also combined with an obverse die of Henry IV which has a mullet punched over the pellet to l. of the crown (RCL and BM); the same obverse die is also used with a reverse (Fox) which is perhaps V (a), and later with a Durham reverse (Fox) of group V (p-r).

- (s). Portrait has wide neck with shoulders sloping out from it. $\overline{\text{N}}$ no. 6 (blunt-footed), $\overline{\text{h}}$ no. 5, $\overline{\text{I}}$ no. 4. Mullet to l., broken annulet to r. $\star \text{h} \overline{\text{E}} \overline{\text{N}} \overline{\text{R}} \overline{\text{I}} \overline{\text{C}} \overline{\text{I}} \overline{\text{R}} \overline{\text{E}} \overline{\text{X}} \star \overline{\text{N}} \overline{\text{R}} \overline{\text{G}} \overline{\text{L}} \overline{\text{I}} \overline{\text{E}} \star \overline{\text{X}} \star \overline{\text{R}}$. The reverse has corresponding letters, and has no marks or quatrefoil after *tas* and double saltire after *don*. [Pl. VII. RCL.]

- VI. Portrait with smaller neck and shoulders and larger face. $\overline{\text{I}}$ no. 4, $\overline{\text{h}}$ no. 5, $\overline{\text{N}}$ no. 7. Initial cross with hollow centre. Mullet to l., annulet, broken or unbroken, to r. Legend as in preceding group,

or ending **ANGLIA·R**. The corresponding reverse has either no marks or a double annulet after *tas* and single annulet after *don*. [Pl. VII. RCL.]

VIII. Similar, but with mullet to l. and trefoil to r. Legend as in preceding group with **ANGLIA** or **ANGLIE**. The corresponding reverse has no marks. [Pl. VII. BM.]

IX. Late portrait with hollowed neck and armpits and new crown. No marks in field. Lettering as before. **†HENRICVS·DI·GR·R·R·X·ANGL·**. The reverse has round pellets set widely apart, a single saltire sometimes follows *tas* and *don*. [Pl. VII. RCL.]

Durham Pennies.

V (a). Corresponding closely to the London coins, and having the fish-tail **I**; the obverse legend is **†HENRICVS·R·X·ANGLIE** with quatrefoil at end. There is a quatrefoil after each word of the reverse legend, which reads **CIVITAS DVROLM**. [Pl. VII. BM.]

(d-i). Corresponding to London coins, but the annulet to r. of the crown is not broken and the obverse legend ends **FRAN**. Quatrefoils remain in reverse legend but not on obverse. [Pl. VII. RCL.]

(p-r). Reverse only is known, it is clearly distinguished by the use of a reversed **Q** in place of **D**, and blunt-footed **R**; the quatrefoils still appear in the reverse legend. It is used with an obverse die of Henry IV, which has a mullet stamped over the pellet to r. of the crown, and which was used earlier with London reverses (Fox).

VIII. Corresponding to London coins of group VI, with mullet to l. and annulet, unbroken, to r., but legend is **†HENRICVS·R·X·ANGLIE**, and on the reverse there is an annulet in the *Civi* quarter and a saltire after each word. Some of these coins, distinguished as VIII b, have the late portrait [Pl. VII. (a) LAL, and (b) RCL].

York Pennies.

- V (a). There are coins following closely the London coins and having the same lettering, legend, portrait, and marks. The reverse has a saltire after *Civitas*. There are also pennies of local workmanship which, as they copy the portrait with tall neck which first appears in this group, belong, I presume, to this or a slightly later period; they have the mullet and the annulet; the egg-shaped swelling on the neck is very prominent; the legend is *** HENRICVS** (or **HENRIC**) *** REX * ANGLIE** (or **ANGLI**, or **ANGLI * R**). The mullet is sometimes replaced by a rosette of five pellets joined by fine lines. One coin (Fox) combines a London-work obverse with a local-work reverse; another (BM) has an obverse of local work with a reverse of London work.

(d-i). One coin (Fox) in fragmentary condition has R no. 3 (with flaw) and, I think, R no. 3.

- (s). The obverse corresponds exactly with the London penny, and on the reverse there is a quatrefoil after *Civitas* [Pl. VII. LAL].

VI. Here again there is close resemblance to the London coins; the annulet to r. of crown is broken or unbroken. Some have double annulet after *Civitas*. There are also coins of this group of local work, which can be recognized by the portrait with large face and small bust, and sometimes by the form of the letter I, which imitates the ornate I no. 4.

VII. Some York pennies, reading *** HENRIC * REX * ANGLIE * R**, and having mullet to l., annulet, unbroken, to r. of the curls, have a pellet to l. of the crown, above the mullet [Pl. VII. LAL].

VIII (a). A similar coin has a trefoil to l. of the crown, the mullet being below it, and an annulet to r. of the crown [Pl. VII. BM].

- (b). Similar to the London pennies, with mullet to l., trefoil to r. of the crown. Legend as before, ending **ANGLIE * R**.

There are several pennies of this class of local workmanship, reading either ***HENRICVS · REX · ANGLIE** or ***HENRIC · REX · ANGLIE · F.**

VIII c or IX. Same marks as preceding, but with new portrait with hollowed throat and armpits. ***HENRICVS · REX · ANGLIE**. The late form of I, no. 5, is used. Presumably these correspond to group IX, though they retain the mullet and trefoil [Pl. VII. BM]. Pennies of this group of local workmanship are very common. Some have an annulet in the *Civi* quarter of the reverse and after *tas*.

VIII (d) or IX (b). Finally, there are pennies of local work similar to the preceding coins, but with mullet to l. and fleur-de-lis to r. of the crown, and an annulet in the *Civi* quarter of the reverse and after *tas*.

HALFPENNIES.

The obverse legend, ***HENRIC · REX · ANGLI**, does not vary throughout the series, except in having double or single saltire stops.

Converted die of Henry IV. A coin (BM) which has a mullet punched over the annulet to r. of the crown is struck from the same dies, both obverse and reverse, as one (LAL) of the ordinary light coinage of Henry IV with an annulet either side of the crown [Pl. VII b. LAL, and c. BM].

Another die of Henry IV, without mullet, is combined with a reverse of group V (a) of Henry V (Fox).

I. The coin with the "emaciated" bust and early lettering has an annulet either side of crown [Pl. VII a. BM].

V (a). Broken annulet either side of crown. This has the characteristic R, no. 3. It is combined with reverses V (j-m) with R no. 5²³ (Fox), and V (p-r) with blunt-footed R, no. 6, and reversed Q for D [Pl. VII d. BM]. One of these obverse dies has a curious form of X shaped like a small quatrefoil.

²³ This is doubtful. R is not clearly visible; I is fish-tailed (V (a) ?).

- (j-l). Broken annulets as before. This obverse is marked by the **H** with a flaw, no. 3, and **R** with broken tail, no. 5. The reverse is **V** (*p-r*) with blunt-footed **R**, no. 6, and reversed **Q** for **D** (Fox).
- (p, q). An obverse with the same marks has the initial cross with hollow centre, and ornamental **I**, no. 4; the letter **H** has the flaw mended, no. 5; **R** is blunt-footed, no. 6. It therefore belongs to group **V** (*p, q*). The reverse is of group **V** (*s*) with similar **R** and **I** and an ordinary **D** (LAL). *Note*.—On the obverse, which has no **D**, the form of **H** marks the die as being earlier than **V** (*r*); on the reverse, which has no **H**, the form of **D** marks the die as later than **V** (*r*). A similar obverse die has a reverse of group **VI** with **R** no. 7, which has a saltire after *tas* (LAL).
- (r, s). Same marks. **H** no. 5; **R** no. 6; **I** no. 4; initial cross with hollow centre. The reverse is either **V** (*p-r*), with reversed **Q** for **D** (BM and RCL), or group **VI**, with **R** no. 7, either with or without a saltire after *tas* (BM and RCL). One reverse (Fox) reads **·CIV** **I·TWS** **·LON** **DON** and is of Group **VI**.
- VI. Similar lettering, but **R** no. 7. Annulet unbroken one side, usually l., and broken annulet the other side, usually r., of the curls. The reverses of this and later groups cannot be distinguished [Pl. VII *e*. BM].
- VIII. Similar, with annulet one side of curls and trefoil the other; on some coins the trefoil is to r., on others to l. [Pl. VII *f*. RCL].
- IX. An obverse without marks in the field has a late portrait but differing from the ordinary portrait of Henry VI which has the bust outlined with a semicircle of drapery; it has, however, the ordinary reverse of Henry VI with annulets in two quarters [Pl. VII *g*]. Conversely, a reverse without annulet but with the pellets widely spaced has the ordinary obverse of Henry VI (both coins are in BM).

FARTHING.

I have not found it possible to find a parallel between the farthings and other denominations; the little that is visible of the lettering on most coins differs from that on the larger coins. I have figured on Pl. VII *h* a specimen which came to the British Museum from the Evans collection, as it seems to have the letter R with broken tail, and it may therefore belong to group V (*j-n*).

I am happy to express my gratitude to many collectors who have kindly put their coins at my disposal for use in preparing this paper. The lists of the known combinations of dies of each denomination denote the ownership of the specimens described and will suffice to indicate the extent of the help which I have received in the loan of coins by Mr. Lawrence (LAL), Mr. Lockett (RCL), Mr. Shirley-Fox (Fox), Major Carlyon-Eritton (PCB), Mr. Walters (FAW), and Mr. Clarke-Thornhill (TCT), though the chief source of my material is of course the National Collection. Sale catalogues are referred to by name with number of lot (Walters 249, &c.). The coins illustrated on the plates are in the National Collection except in cases where the owner's initials are placed after the plate-reference in the text. Die-numbers have been used on the plates, except for the small silver coins, in order to facilitate reference.

G. C. BROOKE

REVIEWS.

Les Monnaies: Guide du Visiteur. Bibliothèque Nationale. Paris, Leroux. 1929. Pp. 159, 32 plates. 30 francs.

This book is a guide to the admirably selected exhibition of coins in the Bibliothèque Nationale. The medals will be dealt with in a later volume, and the series will further include guides to the gems, bronzes, and other treasures of the Cabinet des Médailles et des Antiques. The text is by various members of the staff. M. Jean Babelon deals with the Greek coins, some 2000 in number; M. A. Dieudonné, the Conservateur, describes the Gaulish and French series and the various foreign coins exhibited; M. David Le Suffleur writes on the ancient coins of North Africa and of Rome and the Byzantine Empire, and the Oriental section is the work of M. G. Bataille. The descriptions are necessarily brief, but the main points of interest of each coin are brought out in a way to appeal to the layman, for whom the book is primarily intended. The excellent plates are done from photographs taken direct from the coins, which enables the technique and art of the engraver to be better appreciated. The chief defect of this method, as here used, is that only one side of each coin is shown, but one cannot complain, as it has enabled a book with 32 plates to be produced for the very small sum of 30 francs.

We have little comment to make on the text. Monsieur Dieudonné's section is that which will be most appreciated by the general collector, as it covers a field not readily accessible except in specialized works. The guinea, by the way, was introduced into England in the seventeenth and not the eighteenth century, and the name simply comes from Guinea where the gold came from; the modern sovereign was introduced in 1816, not 1814. This is a book that every one should possess, as the carefully chosen coins give an excellent idea of the treasures of the 400-year-old collection in the Bibliothèque Nationale, and there is no single volume so well illustrated that gives such a clear survey of the evolution of the art of coinage through the ages.

J. A.

L. E. Bruuns Mønt-og Medaille Samling. Copenhagen. 1928. Pp. 655, and 37 plates.

The late Mr. L. E. Bruun of Copenhagen was best known in this country as the owner of the very fine collection of English coins which was sold by Messrs. Sotheby in 1925. He also formed one of the finest collections of Swedish coins

ever brought together by a private individual. The first portion of this was disposed of in his lifetime in 1914 in a Frankfurt auction-room, but the war postponed the sale of the second portion, which ultimately went *en bloc* to America in 1918. Fine as they were, neither of these collections could be compared with his Danish collection, probably the most complete series of one country ever formed privately, rivalled in completeness only by the Coats collection of Scottish coins. This he intended to leave to the Royal Collection of Coins and Medals in Copenhagen, but, as he was not satisfied that its probable home was sufficiently safe against fire, he left it in trust for 100 years, after which it is to be handed over if a satisfactory strong room is then available for it. The series comprised in it are the coins, tokens, and medals of Denmark, Norway, and Schleswig-Holstein, and a collection of coins of Sweden, which, although not on the same scale as the other series, is quite representative. Mr. Bruun was specially interested in the coins struck by Danish rulers in Northumbria, East Anglia, and Ireland, and Norse imitations of the coins of Ethelred II. His collection of these, some 500 in number, which he bequeathed direct to the Royal collection in Copenhagen, is described with three plates in a supplement to this volume, which also contains a catalogue of the fine numismatic library which goes with the coin-collection. In all, some 19,000 coins are described. As the illustrations are confined to coins before 1400, the plates are of much greater value to the student than they would have been if the same number had had to include modern coins also. For the later period the fine plates of H. H. Schou's *Danske og Norske Mønter, 1448-1923*, (Copenhagen, 1926) are already available, so that the whole Norse and Danish coinage is now very fully illustrated. The catalogue of the Bruun collection is mainly the work of Direktor H. H. Schou, and is a scholarly and splendid memorial of a great collector.

J. A.

Le Medaglie di Gregorio XVI. (1831-46). By A. PATRIGNIANI. Rome, A. Duval. Pp. 169, and six plates.

There is probably no series so extensive which has so little literature as Papal medals, and Signor A. Patrigniani, a distinguished member of the Italian Istituto di Numismatico, has now filled one gap most thoroughly. It is only by limiting a volume to a comparatively short period like this that the whole ground can be satisfactorily covered, and this book may well be taken as a model for future works on

the series. Gregory XVI was keenly interested in art generally and attached great importance to the propagandist value of medals, of which over a hundred were struck in his pontificate. In addition to the medals, most of them annual, usual in the series, he struck a number commemorating his public works and a number of a devotional nature commemorating special saints.

Signor A. Patrigniani gives a biographical sketch of Gregory XVI and deals with the various classes of medals issued. He then describes the medals in chronological order, adding to each such historical notes as may be necessary; these notes are the outstanding feature of the book. An appendix contains medals of individuals prominent at the Papal Court in the time of Gregory XVI. The art is not that of the fifteenth century, but it is not without interest. The author is to be congratulated on a most thorough piece of work. The book is published in an edition of 200 copies only, and we trust its success will be such as to tempt the author to deal in similar fashion with another pontificate.

J. A.

The Currency of the Far East. By FR. SCHJÖTH. London, Luzac & Co. 1929. Folio. Pp. 88, 132 plates. 25s. unbound, 30s. bound.

This, the first of a proposed series of numismatic publications of the Numismatic Cabinet of the University of Oslo, is the Catalogue of an extensive collection of coins of the Far East, formed by Mr. Fr. Schjøth during his long period of residence in China as an official of the Customs Service, and presented by him to the Oslo Cabinet. As Sir J. H. Stewart Lockhart's *Catalogue of the Glover Collection* has been long out of print and is now difficult to obtain, while his valuable work based on his own collection only deals with China, Mr. Schjøth's work is sure of a good reception. It differs from its predecessors in being not a bald list of coins but a book full of valuable notes about the coinage from Chinese sources. It does for almost the whole series what Terrien de Lacouperie did for the early period. The collection of Chinese coins is a very representative one, although the nineteenth century might have been much more strongly represented. It has few of the extensive series of Hsien Feng tokens, and none of the rare silver pieces of the middle of the nineteenth century. The section on amulets is of great value as for the first time we are really told something about these pieces. The Korean and Annamese sections are good, but the Japanese, although representative, might have

been larger. The value of the book is in its wealth of historical and folklore notes, and we can now realize how the Chinese have always been interested in collecting their apparently monotonous coinage. Every coin is illustrated. The drawings from which the plates are done are satisfactory, but not so good as the Chinese wood-blocks with which we are familiar in earlier works, and it is quite impossible to tell from them whether a coin is genuine. The book and plates have been excellently printed in England. It is a pity that the author has not given us an index of inscriptions or reign-periods, which would have added greatly to the value of his book—it is after all the third volume of *Lockhart-Glover* that one uses most. We must, however, conclude by commending this book to all who have Chinese coins or want to know something about them, and we are grateful to the author and the University of Oslo for making his collection accessible in such a handsome way.

J. A.

Numismatica. By SALVATORE MIRONE. Milan, Hoepli. 1930.

Pp. 288, 30 plates; 74 illustrations in text. 20 lira.

This is a third edition, entirely rewritten by Salvatore Mirone, of a book on the coins of Italy, ancient, mediaeval, and modern, the early editions of which were written by Ambrosoli and F. Gnechi respectively. The account of the Greek coins of Magna Graecia and Sicily is satisfactory, and the lists of engravers and legends are useful, but the chapter on types is very inadequate. The second part of the book gives a general account of Roman coins of the Republic and Empire with very useful lists of moneyers, emperors, and abbreviations on Republican and Imperial coins. This is followed by brief sections on the coins of the Lombards and other barbarians and of the Arabs in Sicily. The last section on the mediaeval and modern coins of Italy is very inadequate, but contains handy lists of rulers and a full list of saints represented on Italian coins. The bibliographies, which conclude the book, have been compiled without discrimination and are full of misprints. They consist of lists of the more important works on each section with the addition of a bare list of names of others who have written on the subject. Sir Arthur Evans only appears among the "also rans" in the Greek section, and a similar place is allotted to Laffranchi, Mattingly, Maurice, and Voetter in the Roman series, while Kraus's book on Odoavacer is not given in the section on the barbarian invaders.

J. A.

Men whose Fathers were Men: A Story of a Hobby. By "CENTURION". London, A. H. Baldwin & Sons, Ltd. 5s.

This is a very readable book in the form of series of conversations between a collector of war-medals and a friend who is ignorant of the interest these memorials have. The collector, who does most of the conversation, takes his friend through his collection and tells him of all the historical associations possessed by his treasures, the campaigns they recall, and the deeds they commemorate. The little volume presents a hundred years of British military history in most stimulating and entertaining fashion. Incidentally, it gives much valuable advice to the would-be collector. It is a book, which will be enjoyed by those who are already interested in war-medals, while those who are not, can be strongly recommended to read it. It will arouse in them a new interest in a fascinating subject, which they will feel they have hitherto unjustly neglected.

J. A.

A Monetary History of Ancient Ireland. By Rev. PATRICK NOLAN. London, P. S. King & Son. Vol. i, pp. 219; vol. ii, pp. 213. 5s. each vol.

The first volume of this work contains a large amount of badly arranged and ill-digested matter about early media of exchange in Ireland, cows, slaves, bullion, rings, &c. The author's industry is apparent but his work is quite uncritical. The index is much too scanty to justify an entry like "Ledwich, his gross ignorance". The second volume deals with coinage proper down to the time of Elizabeth, and contains evidence of much research into numismatic records, so far as they have been printed. There is nothing to be said in defence of England's treatment of the currency for Ireland, but the writer's indignation carries him away, and his book would have been better had he been content to let the records speak for themselves. Mr. Nolan must be the first person to have written a numismatic work with a strong religious bias. One does not expect him to let off Henry VIII gently, which he certainly does not, but his remarks about Elizabeth are most ungentlemanly, while Matthew Paris would have been shocked to learn that he already showed the cloven hoof of Protestantism.

J. A.

V.

A FIND OF ARCHAIC GREEK COINS FROM THE DELTA.

[SEE PLATES VIII AND IX.]

THE British Museum has recently acquired a hoard of coins from Egypt which, though it does not contain coin after coin of exceptional interest and rarity, like the two hoards recently published by Regling from Dressel's notes,¹ seems worth while putting on record as a whole. It contains one completely new coin (Nos. 27-9) and one or two other varieties of interest; for instance the octodrachm of Abdera (No. 1), the fragmentary stater of Terone (No. 8), the Thraco-Macedonian sphinx (Nos. 30, 31), and the stater of Phaselis with its reverse perhaps reminiscent of hieroglyphs (No. 24). The find was said to have been made at Benha el-Asl, which stands on the right bank of the Damietta arm of the Nile some twenty miles west-south-west of Zagazig. Though in such cases information as to provenance is notoriously untrustworthy, there is nothing inherently improbable in this one, and the question arises whether the hoard has any connexion with the find made in the same place a few years ago, which was said to consist exclusively of silver bullion.²

¹ *Z.f.N.*, 1927, pp. 1 sqq.

² *Annales des Services des Antiquités*, 1924, p. 181; *Z.f.N.*, *ibid.*, p. 6, note 3, and pp. 136-7.

The coins resemble those of the typical Egyptian archaic hoard with the usual preponderance (here more than half) of Thraco-Macedonian coins, and the usual accompaniment of dumps of uncoined bullion. In the article by Dressel-Regling referred to above, where such hoards are discussed in general,² it is conclusively shown that they are not the raw material of the silver-smith, but that their contents must have circulated as a bullion currency, regulated by the scales, among a people for whom the recent invention of coinage had no appeal. That the chisel-cut, found here on every coin, was a precaution against the most obvious form of fraud and not a means of 'demonetizing' the coin by cancelling the type, is shown by its employment on the dump (No. 33), which, of course, has no type to cancel. One of the latest coins in the hoard is No. 23 of Chios—a closely datable coin which falls in the first decade of the fifth century. The hoard was probably buried in the troubled times following the revolt of Egypt against its Persian overlord, which broke out shortly before the death of Darius in 485 B. C.

The coins are described and, where necessary, briefly discussed, below. All, of course, are of silver, and every one has received (unless otherwise stated) at least one chisel-cut. Nos. 16, 17, 24, and 30 had been cleaned before they reached the Museum, the rest were covered with the customary thick purplish deposit of hornsilver and have lost weight appreciably in the necessary cleaning.

² *Z.f.N.*, *ibid.*, p. 3.

Abdera?

1. *Obv.*—Griffin seated l. on its haunches with r. forepaw raised: the wing is curled and the feathers roughly shown: there is no scaly ridge on neck. In field l. a dog seated l. on its haunches: ground-line.

Rev.—Quadripartite square incuse.

28.5 mm.; 451.4 gr., 29.25 grm. (455.8 gr. uncleaned). [PL. VIII.]

An octodrachm with the sitting dog symbol seems to be new, though the running dog occurs on the tetradrachm.⁴ The treatment of the griffin's wing and neck, &c., puts it in the class whose attribution to Abdera seemed to von Fritze, perhaps on somewhat slender grounds, unlikely.⁵

Thasos.

2. *Obv.*—Satyr, r. in the "kneeling-running" pose, ravishing protesting nymph: he is naked and ithyphallic, with horse's hoofs; she wears long chiton.

Rev.—Quadripartite square incuse.

21.0 mm.; 154.4 gr., 10.00 grm. (157.0 gr., uncleaned). [PL. VIII.]

3. *Obv.*—Similar, later style.

Rev.—Similar, the sections nearly forming a swastika.

21.5 mm.; 148.8 gr., 9.64 grm. (157.6 gr., uncleaned).

No. 2 belongs to the first and rarer group of compact fabric and smaller, neater design; No. 3 to the second

⁴ F. Imhoof-Blumer, *Die Antiken Münzen Nord-Griechenlands*, ii, 1, *Thrakien* (Strack), p. 122, d.

⁵ *Ibid.*, p. 21; von Fritze in *Nomisma*, iii, pp. 11-14.

group of flat fabric and broad design which begins about 500 B.C.⁶

Acanthus.

4. *Obv.*—Lion l. attacking bull r.; exergual line consisting of a dotted line between two plain lines; in exergue, inverted bud; dotted circle.

Rev.—Quadripartite square incuse in swastika form.

27.0 mm.; 247.6 gr., 16.04 grm. (after cleaning).

[Pl. VIII.]

5. *Obv.*—Similar, bull's head twisted back.

Rev.—Similar.

26.0 mm.; 262.3 gr., 17.00 grm. (264.6 gr. before cleaning). [Pl. VIII.]

Both coins belong to the earliest issue of Acanthus, characterized by its compact fabric, vigorous style and less developed incuse; other examples were found in the Taranto hoard (*Rev. Num.*, 1912, Pl. II. 7-9). In the next group, which begins about 500 B.C., the square incuse is quartered by raised intersecting lines and the field of the quarters is granulated, while the composition and treatment are weaker and more naive.

Neapolis Datanon.

6. *Obv.*—Gorgoneion (mouth only).

Rev.—Square incuse.

Fragment $\frac{16.5}{9.0}$ mm.; 53.2 gr., 3.45 grm. (58.3 gr. before cleaning).

⁶ *B.M.C., Thrace*, p. 216, Nos. 2 sqq.

Orrescii.

7. *Obv.*—Centaur in the "kneeling-running" pose ravishing protesting nymph; he has horse's ears; she wears long-sleeved chiton and earring; in field I. ΝΩΙΧΣΗΡΩ.

Rev.—Quadripartite square incuse divided by raised lines; field slightly granulated.

21.5 mm.; 141.4 gr., 9.16 grm. (152.8 gr. before cleaning). [Pl. VIII.]

The same dies as *B.M.C.*, No. 8.

Terone.

8. *Obv.*—Amphora with pear-shaped cover topped by knob and secured by knotted cord passing above and below the lip.

Rev.—Rough quadripartite square incuse.

Fragment $\frac{25.0}{19.0}$ mm.; 163.3 gr., 10.58 grm.
(164.7 gr. before cleaning). [Pl. VIII.]

From the same dies as Luynes specimen (J. Babelon, *Coll. Luynes*, ii, p. 6, No. 1547), the only amphora type of Terone with a cover. The weight of the Luynes coin is 220.7 gr., and E. Babelon[†] considers it to be of the "Milesian" standard. Since at least a third of its original flan has been cut off the present piece, its original weight, like that of other coins of Terone, will have been regulated on the Attic standard, and the light weight of the Luynes specimen must be due to cleaning or some other accidental circumstance.

[†] *Traité des monn. gr. et rom.*, ii, 1, p. 1162, note.

Uncertain Thraco-Macedonian.

Formerly assigned to Lete.

- 9-14. *Obv.*—Satyr r. and nymph l. in courtship; he is naked and ithyphallic with horse's hoofs and ears; she wears long, sleeved chiton; he grasps her by the r. wrist with his r. and strokes her chin with his l.; in field l., above and on r. a pellet (often off flan).

Rev.—Square incuse divided diagonally.

9. 20.0 mm.; 143.8 gr., 9.32 grm. (163.0 gr. before cleaning).
 10. 21.5 mm.; 145.0 gr., 9.40 grm. (159.0 gr. before cleaning).
 11. 21.0 mm.; 143.5 gr., 9.30 grm. (158.7 gr. before cleaning). [Pl. VIII.]
 12. 21.0 mm.; 142.2 gr., 9.21 grm. (156.7 gr. before cleaning).
 13. 20.5 mm.; 146.7 gr., 9.51 grm. (158.5 gr. before cleaning).
 14. 22.5 mm.; 143.0 gr., 9.27 grm. (155.9 gr. before cleaning).

All belong to the second group of this series (*B.M.C.*, Nos. 4-7); the field of the incuse is not yet granulated though there is a progressive flattening of the fabric.

Eretria.

15. *Obv.*—Cow r., head turned back, scratching head with hind leg; beneath ♂.

Rev.—Sepia in square incuse.

Fragment $\frac{21.0}{15.0}$ mm.; 84.2 gr., 5.46 grm. (85.6 gr. before cleaning).

Athens.

16. *Obv.*—Helmeted head of Athena r. wearing circular earring, the hair in a straight fringe along the forehead; bowl of helmet decorated with volute, and crest-carrier with row of dots.

Rev.—Owl r.; above on l. olive spray with four or more leaves, on r. ΑΘΞ downwards.

24.0 mm.; 262.1 gr., 16.98 gm. (after cleaning).

[Pl. VIII.]

17. *Obv.*—Similar, hair looped along the forehead (?); hatched decoration on crest-carrier.

Rev.—Similar. Theta has the form ⊙.

26.5 mm.; 255.5 gr., 16.56 gm. (after cleaning).

[Pl. VIII.]

18. *Obv.*—Similar, the hair in a row of little tight curls above the forehead.

Rev.—Similar, theta normal.

27.5 mm.; 247.0 gr., 16.01 gm. (269.0 gr. before cleaning). [Pl. VIII.]

19. *Obv.*—Similar, the hair in fringe.

Rev.—Similar, only two leaves in olive spray; legend obliterated.

27.5 mm.; 245.0 gr., 15.88 gm. (274.0 gr. before cleaning). [Pl. VIII.]

I cannot certainly identify any of these dies among the coins illustrated by Seltman (*Athens, its History and Coinage*) but all appear to belong to the group which he collects under the heading "Civic Mint" (*ibid.*, p. 195). They date from the close of the sixth century.

Aegina.

20. *Obv.*—Sea-turtle with row of dots down the back.

Rev.—Square incuse divided rectangularly and diagonally into eight triangular sections of which all but three are filled up.

22.0 mm.; 185.4 gr., 12.01 grm. (192.0 gr. before cleaning).

Naxos.

21. *Obv.*—Cantharus with bunches of grapes hanging from the handles.

Rev.—Quadripartite square incuse.

25.5 mm.; 186.6 gr., 12.09 grm. (194.2 gr. before cleaning). [Pl. IX.]

Chios.

22. *Obv.*—Sphinx seated l., with spiral lock; r. forepaw raised; dotted circle.

Rev.—Quadripartite square incuse.

17.0 mm.; 112.7 gr., 7.30 grm. (114.3 gr. before cleaning). [Pl. IX.]

23. *Obv.*—Similar, both paws on ground; in front, amphora.

Rev.—Similar.

18.0 mm.; 120.5 gr., 7.81 grm. (130.2 gr. before cleaning). [Pl. IX.]

No. 22, which closely resembles a coin from another Egyptian hoard—the Sakha—belongs to Mavrogordato's second period; No. 23, one of the early coins

with the amphora, to his third period.⁸ Mrs. Baldwin-Brett has pointed out⁹ the likeness in style between the group to which the first belongs and the electrum coins of the Ionian revolt. Our two coins may accordingly be placed just before and just after 500 respectively.

Phaselis.

24. *Obv.*—Prow of galley r. in the shape of a boar's head; three shields hanging along the gunwale.

Rev.—Square incuse divided by raised band into two oblong panels the fields of which are filled with broad random lines perhaps reminiscent of hieroglyphs.

22.5 mm.; 160.4 gr., 10.39 grm. (after cleaning).

[Pl. IX.]

The incuse is interesting. It is, of course, a development of the normal treatment at Phaselis (cp. the Pozzi specimen Naville I, No. 2777) but the arrangement of the broad lines is more definite here and suggests an attempt to give the effect of hieroglyphs, perhaps by an engraver who had actually seen such in Egypt.

Idalium.

25. *Obv.*—Sphinx seated r.

Rev.—Irregular square incuse.

Fragment $\frac{20.5}{15.0}$ mm.; 124.5 gr., 8.07 grm.

(185.1 gr. before cleaning).

Closely resembles *B.M.C.*, No. 1, from the Dali hoard: the attribution seems quite certain.

⁸ J. Mavrogordato, *Chronological arrangement of the coins of Chios*, p. 32, No. 12, Pl. I. 13; and p. 39, No. 17, Pl. II. 4.

⁹ *Electrum and silver coins of Chios in Am. Journ. Num.*, 1914, pp. 36-7.

Uncertain, Golgi?

26. *Obv.*—Lion's head r. with gaping jaws.

Rev.—Irregular square incuse (quadripartite?).

25.0 mm.; 158.8 gr., 10.29 grm. (163.7 gr. before cleaning). [Pl. IX.]

Very similar to the Hirsch coin in Brussels (*B.M.C.*, Pl. XXV. 11) and to a coin in the second Damanhur find,¹⁰ though the incuse is simpler. Regling¹¹ collects other examples of this issue (the Philipsen specimen which he mentions, Hirsch XXV, No. 2822, is now in the British Museum) and gives the grounds for their attribution to Cyprus. The attribution to Golgi is Six's.¹² These coins must clearly go with the lion's head/gorgoneion group assigned to Soli in *B.M.C.*, *Cyprus*, CXVI, which Six also puts to Golgi.

Uncertain. Trisceles/star type.

27-29. *Obv.*—Trisceles of three human legs revolving round a central disk.

Rev.—Square incuse containing floral-stellar pattern, consisting of four lotus buds radiating from a central disk enclosed in a lozenge from the angles of which spring trifid fleurons.

27. (2 cuts on reverse) 22.0 mm.; 161.4 gr., 10.46 grm. (188.5 gr. before cleaning). [Pl. IX.]

28. 24.0 mm.; 161.6 gr., 10.47 grm. (185.7 gr. before cleaning). [Pl. IX.]

29. 27.0 mm.; 160.0 gr., 10.37 grm. (181.9 gr. before cleaning). [Pl. IX.]

¹⁰ *Zf.N.*, *ibid.*, Taf. ii, No. 133.

¹¹ *Ibid.*, p. 78.

¹² *Num. Chron.*, 1897, p. 206.

These three coins are apparently unpublished. All are probably from the same dies on both sides, though their poor condition renders it impossible to say with certainty. Neither type gives much help in the attribution. The human trisceles is found in the Thraco-Macedonian district, where it appears on coins of the Derrones, and on the remarkable staters from the Damanhur Find attributed by Dressel-Regling to Macedonia;¹³ the latter also bear a trisceles of winged lions on the other side. The trisceles, however, also occurs in Central Greece, Phaselis, and Hierapytna in Crete.¹⁴ The floral-stellar pattern of the reverse is a common Ionian pattern. Itself or a close variant is found e.g. at Miletus and Cyme, but also in districts as far apart as the Thraco-Macedonian, the Cretan, and the Cyrenaic.¹⁵ On the whole perhaps the types suggest the Thraco-Macedonian district, where the fabric though not characteristic would certainly pass and where any coin from a Delta Find is *a priori* more likely to belong than not. The weight, however, presents a serious difficulty to this attribution. All three pieces may have gained something through oxidization, as for example No. 19 of Athens has gained five or more grains, and No. 9 of "Lete" may have gained as much as ten; but such gains are exceptional; and as the weights of these three, uncleaned, fall between 180 and 190 gr., it would not seem at first sight likely that they originally scaled less than 180 gr. (11.67 grm.).

¹³ *Z.f.N.*, *ibid.*, Taf. iii, Nos. 146-7.

¹⁴ For a list of places where the trisceles occurs see Agnes Baldwin, *Symbolism on Greek coins* in *Am. Journ. Num.*, 1915, pp. 157 sqq.

¹⁵ *Traité*, *ibid.*, pp. 270, 334, 1259, 1355.

It this is so they must have been struck on the Aeginetic standard. This weight, or indeed anything up to fifteen grains on either side of it, does not fit with what we know of the Thraco-Macedonian district at this early date, but points rather to the southern Aegean or the South-West coast of Asia Minor. Here, for instance, the earliest coins of Miletus, which have exactly the same reverse pattern, are of Aeginetic standard; but the fabric does not suit well; it is too spread and lacks the compactness of the Aegean coins. Weight and fabric would pass for Crete, and it is worth noting that the human triskeles does occur at Hierapytna, while a kindred reverse pattern is found on coins of Itanus of very similar fabric. No coins of Crete, however, occur otherwise in these archaic Egyptian finds, indeed the Cretan cities do not appear to have begun minting before the fifth century; so that an attribution to one of them is hardly likely. The possibility therefore remains that all three pieces have gained considerably in weight and that the standard to which they were struck was that in use in Cyprus. This, though it would entail a gain through oxidization of ten grains or upwards by every piece, is perhaps the least unlikely hypothesis. Cypriote coins are not uncommon in Delta finds and the fabric suits well enough, though neither type is otherwise known in the island.

Uncertain. Sphinx type.

30-1. *Obv.*—Sphinx seated r. with spiral lock.

Rev.—Rough quadripartite square incuse.

30. 34.5 mm.; 195.2 gr., 12.65 grm. (after cleaning).

31. Fragment $\frac{31.0}{20.0}$ mm.; 113.6 gr., 7.36 grm. (141.4 gr. before cleaning). [Pl. IX.]

A similar coin is in Paris which E. Babelon assigns to Asia Minor; Miss Baldwin¹⁶ rightly draws attention to its likeness to other coins of Northern Greece, where its large spread fabric, thin flan, and characteristic incuse indicate that it should be placed among the uncertain Thraco-Macedonian coins.

- 32-9. Cast Dumps, roughly circular, with one side smooth, the other rough; all except No. 33 without chisel-cut.
32. 30.3 mm.; 577.3 gr., 37.41 grm. (619.6 gr. before cleaning).
33. (with chisel-cut) 30.0 mm.; 385.7 gr., 24.99 grm. (407.2 gr. before cleaning). [Pl. IX.]
34. 23.5 mm.; 316.8 gr., 20.53 grm. (323.8 gr. before cleaning).
35. 27.5 mm.; 308.0 gr., 19.96 grm. (312.0 gr. before cleaning).
36. 23.5 mm.; 237.7 gr., 15.40 grm. (uncleaned).
37. 21.5 mm.; 226.0 gr., 14.65 grm. (228.2 gr. before cleaning).
38. 21.5 mm.; 203.2 gr., 13.17 grm. (206.0 gr. before cleaning).
39. 19.5 mm.; 161.9 gr., 10.49 grm. (180.2 gr. before cleaning).

These dumps have been cleaned only sufficiently to determine whether they were coins or not. All show the rough underside resulting from the surface of the receptacle in which they were cast.

¹⁶ *Chios, ibid.*, p. 53, No. 2.

106 FIND OF ARCHAIC GREEK COINS FROM THE DELTA.

The following table shows the sources from which the hoard was ultimately drawn:

THRACE AND MACEDON	{	Abdera	1	
		Thasos	2	
		Acanthus	2	
		Neapolis Datenon	1	
		Orrescii	1	
		Terone	1	
		"Lete"	6	
		Uncertain	2	
			—	16
CENTRAL GREECE	{	Eretria	1	
		Athens	4	
			—	5
ISLANDS	{	Aegina	1	
		Naxos.	1	
			—	2
IONIA		Chios		2
LYCIA		Phaselis		1
CYPRUS	{	Idalium	1	
		Golgi	1	
		Uncertain?	3	
			—	5
		TOTAL		31
				—

E. S. G. ROBINSON.

VI.

THE LATE MR. E. P. WARREN'S HOARD OF TARENTINE HORSEMEN AND OTHER CONTRIBUTIONS TO TARENTINE NUMIS- MATICS.

[SEE PLATES X-XII = A-C.]

LAST June, during a visit to the Coin Department of the British Museum, thanks to the well-known kindness of its curator, Mr. G. F. Hill, I was enabled to make a rapid inspection of a hoard of 425 Tarentine horsemen and one nomos of Heracleia.

This hoard, according to the information supplied, had been purchased by the British Museum from the heir of the late Mr. E. P. Warren of Lewes.

As far back as 1900, Mr. Warren had incidentally referred to this very same find in a letter addressed to the writer from Rome, saying that he had purchased it years ago and laid it aside at Lewes House. Mr. G. F. Hill having informed me that Dr. K. Regling had told him that this hoard had passed through his hands, I thought it might well be worth while to ask the latter for any data he could give me, and the ever-obliging curator of the Berlin Museum kindly answered my inquiry as follows:

"I found the hoard of Tarentine coins, besides one Herakleia, at Warren's in Lewes, as long ago as 1903, and brought them away to Berlin to work through. It seemed to me to be only the *beaux restes* of a larger find, but I could not learn anything at all from Warren and his collaborators as to whether they had taken anything

out of it, and if so what, and nothing about find-spot, composition, &c. As the coins were strongly oxidized, I tried to clean some of them with acid, which attacked them strongly. But as I could not make out anything about find-spot, &c., I just took a list of them, which I now enclose, got seven¹ pieces presented to our cabinet (casts follow) and returned the rest to Warren in 1923. That is all that I know."

With the exception of a very few coins slightly oxidized, most of the horsemen were coated with a very thick dull brown oxidization, and obviously all came from one and the same deposit.

After a judicious cleaning at the British Museum, about 25 coins turned out to be in extremely fine condition; some of them, however, were more or less carelessly struck or badly centred, the surface of the larger proportion of the coins remaining somewhat rough and eroded with, at times, a very raw surface. But it was evident that almost all the coins must have been from extremely fine to brilliant at the time of the deposit.

The British Museum selected 29 horsemen² and

¹ Dr. Regling selected the following varieties (according to the numbering of the subsequent analysis of this hoard, cf. p. 112): Nos. 1, 7, 12 (the latter of exceptionally large module (25 mm.), but with the surface eroded), 14, 16, 18, and 21.

² The British Museum selected the following horsemen: No. 1, one example, weight 7.11 grm.; No. 3, one ex., wt. 7.22; No. 4, two exx.; No. 5, two exx.; No. 7, one ex., wt. 6.41; No. 9, one ex., wt. 6.54; No. 11, three exx., wts. 6.46, 6.54, 5.55—the last one plated; No. 12, three exx., wts. 6.47, 6.45, 6.38; No. 13, two exx., wts. 6.39, 6.28; No. 14, one ex., wt. 6.32; No. 15, one ex., wt. 6.31; No. 16, five exx., wts. 6.37, 6.42, 6.39, 6.31, 6.09; No. 17, two exx., wts. 6.39, 6.20; No. 18, two exx., wts. 6.02, 6.27; No. 19, one ex., wt. 6.20; and No. 22, the only example of Herakleia, A ϵ , 21 mm., wt. 6.29 grm.

disposed by sale of the duplicates. The writer has been kindly allowed to purchase nine examples for his own collection,³ and a few other English collectors availed themselves of this opportunity of enriching their Tarentine series.

The great interest attaching to this hoard, even should it have reached or left Lewes House, according to Dr. Regling's opinion, with the usual leakages, resides in the fact that it includes, with the exception of four horsemen of the last issue of the Italic,⁴ i.e. Tarentine, full-weight standard, part of the earliest group of the reduced-weight⁵ horsemen, at the same time coinciding with the beginning of the Pyrrhic hegemony (c. 281 B.C.). The fine to extremely fine condition of the four above horsemen of full weight belonging to Sir Arthur Evans's Period VI (302-281 B.C.) precludes the possibility, by positive evidence, that the subsequent issues of reduced weight, nearly all in brilliant condition (discounting, of course, the erosion due to heavy oxidization and cleaning), could

³ No. 4, one ex., wt. 6.37; No. 9, one ex., wt. 6.52; No. 11, three exx., all from different dies, wts. 6.52, 6.42, 6.29; No. 12, one ex., wt. 6.46; No. 16, two exx., wts. 6.13, 6.48; No. 17, one ex., wt. 6.36.

⁴ Cf. *Klio*, Leipzig, 1906, K. Regling, p. 504, and *ibid.*, p. 508: the average weight of 741 horsemen of the full-weight standard is given as 7.79 grm. (=120.2 gr.), with a maximum of 8.31 and a minimum of 6.82.

⁵ Cf. K. Regling (*Klio*), *op. cit.*, p. 501. The average weight of 622 horsemen of the reduced standard (= 6 Roman scripula) is given as 6.22 grm. (= 96 gr.). The 1032 horsemen from the famous Taranto find (cf. Evans, 220) gave an average weight of 6.54 grm. (= 100.9 gr.) with a maximum of 6.62 and a minimum of 6.28. All these coins were mostly in very fine condition.

have been current for any length of time at the date when this find was withdrawn from circulation.

In the description of the hoard (cf. p. 112), according to Sir Arthur Evans's classification,⁶ I have taken into account the succinct analysis supplied to me by Mr. G. F. Hill and added further information taken from the valuable notes sent to me by Dr. K. Regling. I must express here my deep obligation to both of them and to the other curators of national collections for their kindness in answering my inquiries and providing casts of coins which were necessary in the preparation of this paper.

Though unfortunately, as we have seen, we have no precise information as to the date or provenance of the Warren hoard, its composition and the very nature and colour of the oxidization affecting all the coins point distinctly to a provenance from Magna Graecia and almost certainly to Taranto or its immediate neighbourhood as the find-spot.

The occurrence of the solitary example of Herakleia, the only other mint represented in this hoard, apparently confirms such a provenance, as very frequently coins of Herakleia are found mixed with Tarentine horsemen in hoards from Calabria or Taranto (cf. Evans, p. 217, and M. P. Vlasto, *Num. Chron.* (1926), p. 212), and the writer has trustworthy information that the very remarkable find of Magna-Graecian coins of Metapontum, Tarentum, and Herakleia, published by Sir Arthur Evans in *Num. Chron.* (1918, p. 134), also came from a spot not far from Metaponto, in the im-

⁶ A. J. Evans, "The Horsemen of Tarentum", *Num. Chron.*, 1889, pp. 1-228.

mediate neighbourhood of Taranto, and that the totality of this find had been marketed at Taranto.

The writer will now first examine the four horsemen (Nos. 1 to 3) of the full Tarentine standard, belonging to Sir Arthur's Period VI (302-281 B.C.), which includes the last issue of Tarentine horsemen of full weight. Although the Tarentine silver staters of reduced weight first appear c. 281 B.C., as Sir Arthur Evans has established in his masterly monograph by overwhelming evidence,⁷ the weight of Tarentine horsemen, which up to c. 302 had been fully maintained at from about 8 to 7.77 grm., shows during Period VI a marked tendency to fall gradually in sympathy with Romano-Campanian silver staters of six scripula, the weight of which had been reduced probably as early as 312 B.C.

No. 1 (Evans Per. VI, Type A 1).

This horseman, now in the British Museum, weighs only 7.11 grm., but before cleaning (according to Dr. K. Regling's notes) it weighed 7.25 grm. Its condition is, however, very good, the coin being only slightly worn. The weights of other examples, in fine condition, of this same type, of which many different dies are known, vary from a little under 8 to 6.90 grm. and this issue must have continued down to c. 282 B.C., the Warren specimen confirming obviously the gradual tendency

⁷ The new theory, expressed quite recently by W. Giesecke in *Italia Numismatica* (cf. p. 122), dating the reduction of the Italic standard at Taras, Herakleia, Thurium, and Croton, as late as 272 B.C., is too fanciful to be taken into serious consideration, W. Giesecke's arguments being mostly unconvincing and in direct conflict with positive, internal and external, well-ascertained evidence of which more will be forthcoming in the present paper.

DESCRIPTION OF THE HOARD.

TARAS.

No.	Reference to Evans.	Obverse.	Reverse.	No. of specimens.
1.	Per. VI, A 1 (302-281 B.C.)	Naked boy of androgynous aspect, crowning standing horse to r. In f. to l. ΞΑ Beneath horse :— ΑΡΕΘΩΝ Cf. Evans, Pl. VII. 1.	TAPAΞ in f. to r. above Taras as an ephēbos, astride on dol- phin to l., holding out in r. hand a tripod. Beneath to r. ΛΑΞ	1
2.	Per. VI, B 1	Nike to l. seizing forelock of prancing horse to l. The rider is helmeted and holds javelin and small round shield on which appears the letter E . Beneath horse :— ΛΥΚΙΣΚΟΣ . (The reading ΛΥ- ΚΙΑΝΟΣ , given by Evans, p. 133, from Carelli, is wrong. Cf. <i>Berlin</i> <i>Beschr.</i> , iii, p. 244, No. 102; G. Macdonald, Hunter coll., vol. i, Pl. V. 14; on a fine example in the writer's collection the reading ΛΥΚΙΑΝΟΣ is certain.)	TAPAΞ in f. to l. ↑ Taras rising on dolphin to l. with extended r. arm holding two jave- lins and small round shield on which appears the letter E . In f. to l. ΙΟΡ	1
3.	Per. VI, B 2	Same, but no inscription visible. Cf. Evans, Pl. VII. 4.	Same.	2

4.	Per. VII, C 2 (281-272 B.C.)	Naked boy-rider crowning stationary horse to r., which lifts near fore-leg. In f. to l. above, ΙΩ Beneath horse :— NEYMH	TAPAΞ in f. to r. beneath → Taras naked on dolphin to l., holding out an Asiatic horned helmet. On either side a twelve-rayed or six-rayed star. In f. to r. above :— APIΞ ↘	18
5.	Per. VII, C 3	Same. Cf. Evans, Pl. VIII. 6.	Same, but in f. to r. above, ΠΟΛΥ ↘	22
6.	"	Same.	Same inscriptions eroded.	13
7.	Not in Evans	Same. Beneath horse :— APIΞ	Same, but in f. to r. above, NEY ↘	2
8.	"	Same.	Same, without NEY (off field?)	1
9.	Per. VII, G	Naked boy-rider crowning himself on horse standing l., which lifts off foreleg. In f. to l., ΙΩ Beneath horse :— ΙΑΟ and capital of Ionic column.	TAPAΞ in f. beneath → Taras holding distaff and with r. extending akrostolion, on dolphin to l. In f. to r. AN	3
10.	"	Same.	Same, but in f. to r. ANΘ	2

No.	Reference to Evans.	Obverse.	Reverse.	No. of specimens.
11.	Per. VIII, A 6 [272-c. 235 B.C.] (but belongs to Per. VII, cf. C 8) [281-272 B.C.]	Naked boy-jockey crowning horse standing L., which lifts off foreleg. In f. to r. above, ΝΚ Beneath horse:— ΦΙΛΟΚΡΑ Cf. Evans, Pl. IX. 2.	ΤΑΡΑΣ in f. beneath → Taras, &c., to l. holding trident in l. hand, extending in r. hand kan- tharos. In f. to r. ΑΡΟΛ ↘, inwards.	40
12.	"	Same.	Same, but in f. to r. ΑΡΟΛ ↗, out- wards.	37
13.	"	Same.	Same, but ΤΑΡΑΣ in f. to r. above ↘ and in f. to r. beneath dolphin ΑΡΟΛ →	62
14.	"	Same.	Same, but ΤΑΡΑΣ in f. beneath → and in f. to l. above ΑΡΟΛ ↗, inwards.	2
15.	"	Same.	Same, no magistrate's name visible (off field?)	25

16.	Per. VIII, C 2 (but belongs to period VII, cf. A 1)	Naked boy-jockey crowning station- ary horse to r. In f. to l. above, $\Phi\Lambda\text{OKPA}$ Beneath horse, NK	$\text{TAPA}\Sigma$ in f. to r. above \searrow Tarus astride, &c., to l. holding in l. hand trident and with r. receiving small wreath-bearing Nike. In f. beneath to r. $\text{API}\Sigma\text{TO}$ or $\text{A-PI}\Sigma\text{TO} \rightarrow$	179
17.	"	Same.	Same, but $\text{TAPA}\Sigma$ in f. to l. beneath (often off flan), and in f. to r. above, $\text{API}\Sigma\text{TO} \searrow$	8
18.	"	Same.	Same, but in f. to r. above, $\text{API}\Sigma\text{TO} \nearrow$, outwards.	6
19.	"	Same.	Same, but in f. beneath, $\text{TA} | \text{PA} \curvearrowright$ and in f. to l. $\text{API}\Sigma\text{TO} \curvearrowleft$, in- wards.	1
20.	"	Same.	Same, magistrate's name off field.	6
21.	Per. VIII, C 3	Same.	Same, but $\text{TAPA}\Sigma$ in f. to r. \searrow . In f. beneath to r. $\text{AP}\text{O}\Lambda \rightarrow$	1
Total of Tarentine horsemen Minus 7 presented by Mr. E. P. Warren to the Berlin cabinet				432
				7
				425

of decline in weight noted above, the Boston⁸ example being the lightest known to me.

Type A 1 is, however, one of the first horsemen bearing on the obverse the full-length signature of a civic magistrate or mint official. A now very long acquaintance with the Tarentine coinage has convinced the writer that Sir Arthur Evans is absolutely correct when assigning to the actual engravers the shorter signatures relegated, *on the obverse*, to a secondary position during Periods VI and VII. The fact that the signature ΣA placed in the field to left above, on this type, belongs to an engraver has been well ascertained by Sir Arthur (cf. *op. cit.*, pp. 115-16). The *floruit* of this artist, who also worked for the Metapontine mint,⁹ must be c. 334 to c. 282, the above type being the latest Tarentine horseman-die bearing his signature.¹⁰

Nos. 2 and 3 (Evans Per. VI. Types B 1 and 2).

Although Sir Arthur Evans considers that this fine type of Nike leading the victorious armed horseman is *probably* to be referred to the very beginning of this Period (302-281 B.C.), the extremely fine condition,

⁸ This horseman, weighing 6.90 grm., formerly in the Greenwell collection, is described by Dr. K. Regling in his *Catalogue of the E. P. Warren Collection* under No. 45, with the following note: Das auffallend niedrige Gewicht beruht auf nachlässiger Justierung, drei gleiche Berliner Exemplare mit denselben drei Beamtennamen wiegen 7.89, 7.85, 7.82 grm.

⁹ Cf. Jean Babelon, *Catalogue de la Collection de Luynes*, Pl. XVIII. 498, and M. P. Vlasto, *Num. Chron.* (1926), p. 204. This latter example, showing strong Tarentine influence, is figured in *Italia Numismatica* by W. Giesecke, Pl. 8. 10, with other Italic silver coins belonging to an earlier date.

¹⁰ The signature ΣA appears also on some Tarentine gold coins struck before c. 315 B.C., as Evans, Pl. V. 9 and 10, and c. 300-282 B.C., as Evans, Pl. V. 14, cf. W. Giesecke, *l.c.*, Pl. 13, 16, and 18.

after cleaning, of the Warren example now at Berlin [Pl. X (A). 1] leads the writer to believe that this late revival of one of KAA's masterpieces struck during Period IV (cf. Evans, Pl. IV. 7, and M. P. Vlasto, *Num. Chron.*, 1926, Pl. XI. 18) should be now assigned to the end of Period VI.

This later dating, as we shall see lower down, is confirmed not only by internal evidence but also by the presence of a very fine specimen of this same type, with six other horsemen of reduced standard, in the Baron Edmond de Rothschild's Tarentine silver pyxis, of which more will be forthcoming in the present paper. It may also be noted that the fine preservation of the examples, probably included, in the Evans find (cf. *Num. Chron.*, 1918, Pl. VI. 14) points also to the proposed later dating of c. 284-283 B.C.

No type could be more appropriate than the reverse of this horseman to express the bitter feelings of the infuriated Tarentines when the Roman squadron appeared, c. 284 B.C., within actual sight of their city, and we are apparently justified in seeking a probable allusion to this memorable event when we consider the warlike attitude of Taras armed, rising to his full height, resting his right knee on the dolphin's back, turned to left and extending his right hand, as if calling for the help of all the cities formerly belonging to the League against their common foes the Romans.

On a perfectly-struck specimen of this type in the writer's collection, the letter E appears on the round shields on both the obverse and the reverse, and on another example, also in his cabinet, the shield on the reverse is inscribed E. I much regret that I cannot here follow Sir Arthur when he considers that the E

recalls the **ΕΙC** that appears upon the shield on an extremely rare armed horseman (Evans, Pl. VIII. 12: in the Bodleian collection, also represented in my coin cabinet) belonging to the Pyrrhic Period (VII. F. 6).

The bold but careless and unfinished work, and the exaggerated relief of this type are, in the writer's opinion, sufficient to authenticate this **E**, at times *retrograde*, as the signature *en artiste* of the engraver **EY**. This engraver, as shown by Sir Arthur (*l. c.*, p. 116), begins to work *shortly before the reduction* of the standard and signs **EY** (cf. Evans, Pl. VII. 10, 11, 12) or at times **EY retrograde** (cf. Evans, Pl. VII. 13), his first dies, belonging to the end of Period VI, all of conspicuously high relief.

The three Warren didrachms of this type were very heavily coated with oxidization, especially the Berlin specimen, and weighed respectively before cleaning 7.27 grm. (now in the British Museum), 7.15, and 7.87 (Berlin). The British Museum example, after cleaning, weighs now only 7.06 grm. and, though fine, has its surface somewhat eroded. Even taking into consideration the normal loss in weight due to cleaning and oxidization, it is evident that all three, when fresh from the dies, must have weighed well under the full weight of 7.77 grm. This remark has its importance not only as showing again that towards the end of Period VI (c. 284 B.C.) the Tarentines started a gradual adaptation to the Roman system, which was to be introduced by law only after the arrival of Pyrrhus (281 B.C.), but also as explaining the rather perplexing and well-known, possibly slightly earlier, reduction of some Tarentine drachms bearing the same civic magistrate's name **ΙΟΡ**, struck on the Roman three-

scripula standard, thus reducing to only a very few years this Tarentine *limping* standard first noticed by Sir Arthur Evans¹¹ and since ably discussed by Dr. B. Head, Dr. K. Regling,¹² and W. Giesecke.¹³

As in this article I shall have henceforward constantly to refer to the last series of gold coins struck at Taras during the Pyrrhic Hegemony,¹⁴ from 281 to 272 B.C., which are, as will be shown shortly, *strictly contemporary with all the Warren horsemen of reduced weight*, I have given on Pl. XII (C). 1-10 the reproduction of the ten known die-combinations of Pyrrhic gold staters and of a few kindred contemporary gold divisions of the stater, conspicuous for their brilliant preservation or rarity, thus complying with the wish recently expressed by M. Adrien Blanchet¹⁵, my *Monnaies d'or de Tarente*¹⁶ being long since out of print.

¹¹ Cf. *op. cit.*, p. 125.

¹² Cf. *Klio*, vi, 519, Note 3.

¹³ Cf. *Ianus Festschrift*, 1921-3, p. 143, and his latest views in *Italia Numismatica*, p. 124. The unique gold stater now in the Luynes collection (cf. J. Babelon, Pl. X. 242) bearing the same name **ΙΟΡ**, and no doubt an unsigned work of the engraver **ΞΑ**, belongs to the same issue and is correctly dated by W. Giesecke c. 302-284 B.C.

¹⁴ This dating, proposed by Sir Arthur (*l.c.*, p. 140), is now fully confirmed by the unanimous consensus of all the highest authorities including W. Giesecke in his "Gold and Silver of Tarentum" (cf. *Ianus Festschrift*, 1921-3, 143) and his *It. Num.* (1928), p. 107.

¹⁵ Cf. *Revue Numismatique* (1925), *Procès-Verbaux*, p. xxx.

¹⁶ Cf. *Journal International d'Archéologie Numismatique* (1899), p. 303, and (1901), p. 93. The writer hopes some day to be able to publish a revised edition of this monograph, *péché de jeunesse*, written some thirty years ago, as a few of his datings must now be altered in the light of the very important *positive evidence* supplied by numerous well-known finds of gold coins of Taras which have occurred since 1901. I cannot follow most of W. Giesecke's new datings, which are obviously chosen to fit this learned author's remarkable but, at times, over-hazardous personal metrological conclusions.

Nos. 4 to 8 (Evans, Per. VII, Types C 2 and C 3).

The writer must once more refer to Sir Arthur's monograph (pp. 148 to 152), where the historical importance of the reverse of this type is admirably discussed, and where positive evidence is brought forward showing that the Types C 2 and C 3 belong to the very first issues of reduced standard and were struck immediately after the arrival of Pyrrhus at Taras (281 B.C.). Sir Arthur has also drawn attention to a remarkable and, to the best of my knowledge, unique horseman in the British Museum (cf. Evans, Pl. VIII. 5), having the identical obverse type with its double inscription **IO NEYMH**, coupled with a reverse die of the well-known Pyrrhic martial type of Taras on his dolphin (cf. Evans, Pl. VIII, 1 and 4), inscribed **AP**, with the significant elephant-symbol¹⁷ which we have *every historical reason for connecting with the arrival of Pyrrhus*.

The name of the civic magistrate **NEYMH** is only an abbreviated form of **NEYMHNIOΣ**,¹⁸ inscribed on the contemporary issues of Tarentine drachms of

¹⁷ Amongst other arguments brought forward by W. Giesecke (cf. *It. Num.*, p. 123) to justify his new dating (c. 272 B.C.) of the reduction of the Tarentine standard, he has recently expressed the opinion that the elephant-symbol of these archer types has nothing to do with Pyrrhus, a most extraordinary assertion.

¹⁸ Referring to Evans, p. 204, Note 235, it may be noted here that the writer has seen many silver drachms (?) with the absurd inscription **INVANIΩ** or **YNVANIΩ**, coupled with **ΞΩ** or **A** (cf. Avellino, *Boll. Arch. Napolit.*, T. II, p. 100; Carelli, *N.I.V.T.*, CXV, p. 236; Garrucci, T. XCIX, 11, 12, 13). They are all forgeries, apparently dating from the seventeenth century, and to be met with amongst the spurious coins in many ancient collections, struck also in gold (Paris) or even bronze (Athens).

reduced standard, also coupled with ΠΟΛΥ or ΑΡΙΞ (cf. Evans, p. 162, 1 and 2).

The very rare variety described under No. 7 with ΙΩ ΑΡΙΞ on the obverse [Pl. X (A). 2, Berlin], not known to Sir Arthur Evans,¹⁹ confirms that ΑΡΙΞ as well as ΑΡΟΛ can only be the names of civic magistrates superintending the mint, and that ΙΩ is to be referred to the actual engraver²⁰ of all these dies. This engraver signs *en artiste* Ι on the cheek-piece of Athena's helmet, some contemporary drachms,²¹ coupled with reverses inscribed ΙΑΛΟ ΑΝ, or Α (ΑΡ) and Α(ΑΝ), monograms standing obviously for the well-known Pyrrhic magistrates ΑΡΟΛ and ΑΝΘ-ΡΟΡ.²²

The weights of the Warren examples of Nos. 4 to 8, after cleaning, varied from 6.50 to 6.03 grm., the finest ones giving an average weight of about 6.38, but a certain percentage (Nos. 6 and 8) of these didrachms presented surfaces badly eaten, making it impossible

¹⁹ This variety was first published in *Num. Chron.* (1922), cf. M. P. Vlasto, pp. 245, 247 of *Miscellanea*. I had, however, obtained years ago at Taranto (1904) two choice examples of this type from different dies for my cabinet, weighing 6.58 and 6.32, and a third specimen, badly described, was lot No. 73 of the G. Picard Paris sale, 14th February, 1923. Cf. F. M. Avellino, *Italiae Veteris Numismata*, Naples, 1808, 14. 164.

²⁰ These signatures ΙΩ or Ι are also met with on many contemporary horsemen (Evans, VII, F1-F6, G1, K1, K2), and on a few diobols of the reduced standard.

²¹ Cf. Evans, *l.c.*, pp. 162, 164-5.

²² This magistrate's name first appears on one of the last full-weight Tarentine issues and has hitherto been read ΑΝΘΡΟΣ. (cf. Evans, *Per.* VI, D 1). A fine example, struck on a large flan, purchased by the British Museum at the Banbury Sale (1896), lot 96, shows clearly that the last letter is Ρ and that the reading ΑΝΘΡΟΡ is quite certain.

to sort them with great accuracy. Many dies were no doubt simultaneously put into use for this issue, especially reverse-dies, some of which were apparently very hurriedly engraved. Although the two stars on the reverse of the *master-dies*²³ of this type are twelve-rayed (six long rays alternating with six short ones), on many of the Warren examples the stars were only six-rayed.

Nos. 9 and 10 (Evans, *Per.* VII, Type G).

Seventy-nine examples of this very common type, also signed by the engraver **ΙΩ**, were included in the Calabrian find (cf. Evans, p. 216) which, as shown by Sir Arthur, was deposited about the date of the Roman occupation of Taras in 272 B. C.

That the magistrate's name **ΙΑΛΩ**, already noticed above on a contemporary drachm, also with **ΑΝ** (or at times **ΑΝΘ** = **ΑΝΘΡΟΝ**), belongs to the beginning of the Pyrrhic hegemony is further corroborated by the presence of this name under the abbreviated form **ΙΑ** on some of the well-known Tarentine contemporary gold quarter-staters engraved, as we shall show lower down, by the artist **ΝΙΚΑΡ.**, and struck undoubtedly very shortly after the arrival of Pyrrhus [cf. *Pl. XII* (C). 11, 12, 13, 14, 16] mostly associated with **Α** and that very characteristic Aeacid badge the spear-

²³ The writer calls *master-dies* those most carefully engraved and no doubt the very first dies engraved for any new coin-type. On the reverse of one of the latter (Type VII, c. 3) in the writer's cabinet, the horned Asiatic helmet, in Taras's extended r. hand, is adorned with a minutely engraved laurel-wreath, whereas at times this symbol is so badly designed that on the R. Jameson example it appears more like a nautilus-shell than a helmet (cf. R. Jameson, *Cat.*, T. 1, p. 48, No. 197).

head. This monogram **Α**, as has been well established by Sir Arthur, belongs obviously to the same magistrate signing, a few years earlier, **ΑΠ**, associated with the same spear-head symbol, the silver didrachm of full weight issued at the end of Period VI, type E 2 (Evans, Pl. VII. 10), and after 281 B.C. again signing, under the fuller form **ΑΠΙΞΤΙΡ**, early pieces of reduced weight with the elephant-symbol. (Evans, Per. VII, A 1, B 1, C 1).

The five Warren didrachms of type G weighed, before cleaning, 6.20, 6.46, 6.18, 6.32, 6.53 grm. (the last coin now in the British Museum), whereas the average weight of the 79 examples from the Calabrian hoard, which had not lost weight by cleaning or oxidization, was 6.51 grm.

Nos. 11 to 15 and 16 to 21

(cf. Evans, Per. VIII, A 6 and C 2, C 3).

As many as 166 examples of Evans VIII, A 6, and 201 of C 2-3 (these two types obviously linked together by their inscriptions), in all 367, were included in the Warren hoard, representing a proportion of almost 84 per cent. of its total, it being evident that the burial of this find must have taken place during the very large issue of these last two types necessitating a remarkably large number of dies with many small variations and making it certain that Taras was called on then to defray a large part of the expenses of the Pyrrhic enterprise, and that the Tarentine mint must have been particularly active to be able to satisfy the endless exactions of the Epirote ally.

It is highly probable that Dr. K. Regling, taking into due consideration Sir Arthur's somewhat later

dating of these two types at the *very beginning* of his Period VIII (after 272 B.C.), thus separating them by a small gap from the earlier Warren horsemen, suspected that the coins seen by him, first at Lewes House and afterwards at Berlin, might be only the *beaux restes* of a more important hoard.

The writer has, however, shown seven years ago (cf. M. P. Vlasto, *Num. Chron.*, 1922, *Miscellanea*, pp. 245-6), following the positive evidence provided by the 1922 find from Southern Italy, that type A 6 of Evans Period VIII should be brought back to Period VII, this being also apparently corroborated by the negative evidence of another find (cf. M. P. Vlasto, *Revue Numismatique*, 1912, p. 283). It may, however, be noted here that Sir Arthur's slightly later dating for both these types was given rather reluctantly (cf. *l.c.*, p. 154) and probably only owing to the absence of any obvious Pyrrhic indication, this dating being also in absolute conflict with the evidence of the Calabrian find (*l.c.*, p. 216), which contained 17 horsemen of VIII A 6 and 14 of VIII C 2, and again in conflict with the negative evidence of the great Taranto 1883 find (*l.c.*, p. 219), which included 47 horsemen of twelve different types, *all much worn*, belonging to Period VIII, without a single example of Types A 6 or C 2-3, mixed with 945 post-Pyrrhic Tarentine didrachms.

It is now time to show the great archaeological importance of the earlier dating proposed here by the writer.

A few months ago I was allowed to examine the few horsemen, mostly heavily oxidized, contained in the beautiful silver pyxis belonging to the famous treasure

of ancient silver plate found at Taranto, on the 9th September, 1896, on a spot where now stands the villa Martorano, via Principe Amedeo, first published by Patroni (cf. *Notizie degli Scavi*, 1896, pp. 376-82) and purchased later by Baron Edmond de Rothschild. This splendid treasure will shortly be adequately republished by my friend the learned young French archaeologist Mr. P. Wuilleumier, who during his residence at the French School of Rome has made a special study of Tarentine archaeology,^{23a} but I am, however, kindly authorized by him to recall here that this treasure is composed of two plates, one amphora, one incense-burner and the pyxis, all in massive repoussé silver partly-gilt. The pyxis, when purchased, was thickly coated with a dull brown oxidization, with its lid tightly closed, as if soldered by very heavy sulphide of silver. When the pyxis was judiciously cleaned and opened by that clever restorer, the late Alfred André of Paris, it was found that the remarkable representation on the lid was signed **ΝΙΚΩΝ ΕΡΟΙΗΞΕ** (a typical Tarentine name, cf. Evans, Pl. VII. 10) and that the pyxis contained seven Tarentine horsemen mostly oxidized, which have not yet been cleaned. Both these important discoveries were quite ignored when Patroni first published this find. Owing to the courteous kindness of the Baron and of his learned curator Mr. A. Blum, I was allowed to examine the treasure and asked to identify and date the coins.

By a most remarkable coincidence *all the seven horse-*

^{23a} Cf. P. Wuilleumier, *Mélanges d'Archéologie et d'Histoire publiés par l'École Française de Rome*, T. XLVI (1929). *Brûle-parfums en terre cuite*.

men are of types represented in the Warren hoard, including a very fine example, of the full-weight standard, of Type Evans, Per. VI, B 2, the six others belonging to the Pyrrhic light-weight issues, thus giving a *terminus post quem* of equal importance both for this treasure and for the Warren hoard.

The seven horsemen were of the following types. One, as Evans Per. VI, Type B 2 = Warren No. 3, in very fine condition; one, as Evans Per. VII, Type C 2 or C 3 = Warren No. 4 or 5, oxidized; two, as Evans Per. VII, Type C 3 = Warren No. 5, very fine; one, as Evans Per. VIII, Type A 6 = Warren Nos. 11 to 15 (?), very much oxidized; and two, as Evans Per. VIII, Type C 2 = Warren No. 19 or 20 (?), one fine, the other much oxidized.

It is noteworthy to find, as in the Warren hoard, these last two types, which were evidently, to a trained eye, in very fine condition when put aside in the pyxis, in spite of their present appearance, mixed together with the earlier horsemen (Evans, Pl. VII. 4 = Warren No. 3), also in very fine preservation, showing once more by unexpected new positive evidence that only a very few years can separate these issues.

Obviously both the Tarentine owner of this magnificent silver plate and the Warren hoarder must have lived during the same thrilling years following the Victory of Herakleia (280 B. C.), which is probably recalled by the type of the reverse of the horsemen described under Nos. 16 to 21 and by other contemporary didrachms (cf. Evans, Pl. VIII. 3, 9, 10) on which Taras is seen holding out his hand to receive a small Nike who reaches forth a wreath to crown his head [Pl. XI (B). 2, 4, 8].

The writer may now revert to the Warren horsemen described under No. 11. No perfectly struck or quite complete specimen of this type being available, a remarkably fine didrachm, no doubt from the master-die,²⁴ is given on **Pl. X (A). 3**. As noted above many dies, especially for this reverse, were simultaneously put into use and two Warren examples from different dies, but obviously by the same engraver, are depicted on **Pl. X (A). 4** and **5**. Dr. K. Regling has noted that the ethnic **TAPAΞ** is placed, on 17 Warren coins, in the field beneath, to right of Taras's left foot, on 15 others more or less directly beneath, and on as many as 52 examples so far down that, owing to careless centring, it has often disappeared, being off-field.

Among the three Warren horsemen selected by the British Museum there is also a very curious plated coin of this type weighing 5.55 [**Pl. X (A). 6**], whilst the average weight of the other examples is, after cleaning, 6.38. On this plated coin the magistrate's name is engraved, on the obverse, in misshapen letters, out of line, **ΦΙΛΟΚΙΑ**, blundered for **ΦΙΛΟΚΡΑ**, and the reverse is inscribed **ΑΡΘΑ** for **ΑΡΘΑ** and **ΤΑΡΙ** for **TAPAΞ**. Such blundered inscriptions are not uncommon during the long and prolific Tarentine coinage, especially when the coins do not belong to official issues.^{24a}

²⁴ In the writer's collection, $\text{Ar } 22.5 \text{ mm.}$, wt. 6.54 grm., formerly in Dr. Pozzi's cabinet, but not included in his sale. The coin is figured **Pl. XV. 375** in the catalogue of the Pozzi Collection issued by Dieudonné for private circulation only.

^{24a} Cf. Lugano (1929), *Cl. Côte Sale Cat.*, **Pl. VII. 203**, with **TPAΞ**, now in the writer's collection, in which is also another plated early horseman from the same official obverse die, as **R**.

On the reverse-dies described under Nos. 12, 13, and 14, each of which is represented by numerous dies, the place occupied in the field by the magistrate's name **ΑΠΟΛ** (engraved at times inwardly, at times outwardly) (Pl. X (A). 7 and 9) alternates often with that of the ethnic. The reverse depicted on Pl. X (A). 11, with **ΑΠΟΛ** in the field above to left, appears to be hitherto unpublished.

No example of the rare variety with **APEY** taking the place of **ΑΠΟΛ** (Evans, VIII, A 7) was to be found in the Warren hoard.

The writer has been unable to trace the didrachm of this type, formerly in the Evans collection, which may have been included in lot 123 of the 16 June, 1905, Paris Sale (ex. R. Jameson = A. J. Evans), but owing to the kindness of Dr. Pink, the obliging curator of the Vienna cabinet, he can show, Pl. X (A). 12, the coin, once in the Carelli Collection, and described by the latter under No. 348. This horseman is *plated* (weight 5.70), and the writer very much doubts if any magistrate named **APEY** ever existed on official dies, this name being more probably a

Jameson, *l.c.*, Pl. VI. 111 (*not plated*), and Hirsch 1906, XVI, Munich sale, Pl. I. 30 (wt. 7.85), also apparently *not plated*, the first of which and the last inscribed **ΤΑΣΡΑΣ**. This blundered form of the ethnic is even to be met with on a reverse die of a Tarentine gold litra (cf. M. P. Vlasto *J.I.A.N.* (1899), Pl. 18' 22, p. 341). A careful examination of the Paris example has allowed the writer to ascertain this reading in place of those he previously proposed: **ΟΝΙΘΛΕ** or **ΦΙΛΗΜΕ**, the first being absurd, the second impossible, these litrae belonging to *circa* 281-272 B.C. Another litra sold at the Cl. Côte Sale Pl. XI, p. 320, formerly H. Weber (L. Forrer, Pl. 25-552), is struck from the same reverse-die, though **ΤΑΣΡΑΣ** is read by an oversight of Mr. L. Forrer **ΤΑΡΑΣ**.

blunder for ΑΡΟΛ or intended possibly for ΕΥΑΡ or ΑΡ—ΕΥ.²⁵

Many of the Warren horsemen are of a broad-spread character, at times with flans measuring fully 25 mm., this fabric linking them to the last issues of the full standard, whereas the post-Pyrrhic horsemen are for the most part struck on small flans and of much later style.

The scheme of the boy-rider crowning his steed, which lifts up its off foreleg, is treated also on these Warren coins in a much finer style than on the later horsemen of same type struck during the Roman alliance, on which the ill-drawn horses, as on the *contemporary*²⁶ *Campano-Tarentine issues*, have quite a wooden appearance. In fact the Tarentine horsemen under consideration are fine and clever *copies* from the Type C 8 (Pl. X (A). 14 *obr.*) belonging to the Period VII, and their description should henceforward immediately follow this last type, which includes some of the prettiest horsemen belonging to the Pyrrhic

²⁵ Cf. Evans, *l.c.*, p. 135, Type VI. H, the magistrate's name ΕΥΑΡΧΙΔΑΞ.

²⁶ The new dating proposed by W. Giesecke (*It. Num.*, p. 116), bringing down the Campano-Tarentine issues to 216-208 B.C. during the Hannibalic occupation, is too extraordinary to need refutation, in fact, the coin of this class depicted by him Pl. 19, No. 13, is one of the finest and earliest of the whole series signed by the engraver ΕΥ, and cannot have been struck much later than c. 286 B.C. The writer has often seen small finds from Campania, in which these Campano-Tarentine issues were found mixed with early Romano-Campanian silver coins and a few badly-worn late didrachms of Neapolis. The positive evidence of the well-known Vulcano hoard points to the same conclusion. Cf. G. Macdonald, *Num. Chron.* 1896, pp. 185 ff. = G. F. Hill, *A Handbook of Greek and Roman Coins*, p. 219 = S. P. Noe, *A Bibliography of Greek Coin-hoards*, New York, 1925, p. 234.

hegemony (cf. Evans, Pl. VIII. 7, 8). The prototype of this revival of a type which had appeared at a very early period (cf. Evans, Pl. III. 11, 12) is no doubt the contemporary extraordinarily²⁷ rare and highly interesting horseman first published by E. J. Seltman (*Zeit. f. Num.*, 1895, p. 284), now in the writer's collection, bearing the inscription **ΑΡΙΣΤΟΞ** and the Pyrrhic monogram **Α** (cf. Evans, Type M 1) with the remarkable and unique symbol of the Python coiled round a bow shooting an arrow (Pl. X (A). 13 *obv.*), which has been explained as a pun on the name of Aristoxenos (*ἄριστον τόξον*). The writer is also very much inclined to transfer back to this same Type C of Period VII the presumably unique horseman in the British Museum (cf. *B.M.C., Italy*, p. 180, No. 155) ascribed by Sir Arthur Evans to the beginning of Period VIII (A 3), its fine style, signature, and inscription **ΓΥ**, **ΙΩΓΥΡΟΞ**, coupled with **ΧΡΗ**, which obviously represents the fuller form of the monograms **ΧΡ** = **Χ** (Evans VII, C 8) = **Χ** or **Χ** (Evans, VII, L 1), all belonging to well-known Pyrrhic horsemen. The writer will now draw the reader's attention to a very peculiar feature of the horse's head-dress, hitherto apparently undetected, which is almost exclusively found on the finest types²⁸ *belonging to the Pyrrhic hegemony*. On

²⁷ Only two other examples are known to the writer, both from the same dies, the first one in the R. Jameson Coll. (*l.c.*, Pl. X. 210), the second in the Museo Archeologico Provinciale at Bari.

²⁸ Cf. Evans, VII, A. 5, C. 1, 2, 3, 4, 8, E. 2, G. 1, L. 1, and on other Pyrrhic horsemen unknown to Sir Arthur when he wrote his masterly monograph, as Cl. Côte Sale Cat., Pl. XVII, now in the writer's collection, with three varieties of this type, inscribed **ΞΙ**, **ΛΥ**, **ΘΕ** (cf. Fiorelli, *Cat. Santangelo*, No. 2517, with the wrong reading **ΟΞ** in place of **ΘΕ**) coupled with **ΞΙ** on the

these coins the forelock of the horse's mane is apparently tied into a kind of topknot either, horn-like, protruding upwards (Pl. X (A). 4, 13) or terminating in a knob (Pl. X (A). 3, 5, 9, 11, 14; Pl. XI (B). 1, 3, 4). This remarkable feature may possibly have an agonistic apotropaic signification, as not many years ago one could see in the streets of Naples, Taranto, or Palermo small, unicorn-like horses sporting a similar headdress, a turquoise-blue tape binding, at times, their forelocks, this horn-like ornament being still considered an efficient protection against the evil eye.²⁹

Nos. 16 to 21 (cf. Evans, *Per. VIII*, Types C 2 and C 3).

Most of the Warren horsemen of these types have suffered from oxidization and cleaning, and only a very few examples, struck on one side or the other from dies of somewhat crude style and evidently engraved in all haste, are to be found in fine preservation (cf. Pl. XI (B). 3, 6, 7, 8). On Pl. XI (B). 1 and 4 are depicted two very fine examples from the master-dies, the first in the Royal Numismatic Collection of Copenhagen, the second in the writer's coin-cabinet.^{29a} Both coins are of remarkably high relief and show

reverse, or ΘΕΞΙ coupled at times with ΛΥ (cf. Paris, 1922, sale (Lundean), Pl. II, 80). These inscriptions obviously connect these horsemen to Types A 5 and 6 of Period VII.

²⁹ Cf. F. T. Elworthy, *The Evil Eye* (1895), p. 204 and p. 207, note 339. For topknots in sculpture, vase-painting and terracotta reliefs, cf. R. Hinks in *Journ. Hellen. Stud.* 1927, p. 219.

^{29a} AR 20 mm., wt. 6.51 grm., from the A. H. Lloyd, A. J. Evans, and F. S. Benson collections, cf. F. S. Benson, *Sotheby*, London sale, 1909, Pl. I. 9. This coin is from the same dies as the Warren horseman Pl. XI (B). 5, now in the British Museum, on which, owing to erosion, the magistrate's name ΑΡΙΣΤΟ in field to left is not visible.

how the anatomical details, alike of rider and horse, are worked out with over-elaborate care and rather exaggerated minute fineness. Such small details as the *pudenda* and even the nipples of Taras's breast are most carefully indicated with surprising gem-like accuracy, and no one, I think, who has minutely compared the technique of both sides of the Types Nos. 11 and 16 on **Pl. X (A). 3, 7, 9**, with **Pl. XI (B). 1, 2, 4, 5** will doubt the correctness of the conclusion that all these dies are by the same engraver.

The Warren horsemen of Type No. 16, one of which is figured on **Pl. XI (B). 3**, with the crude obverse of hasty work and the magistrate's name **ΦΙΛΟΚΡΑ** cut in very large letters, may possibly have been struck from a hubbed obverse-die. On **Pl. XI (B). 8** is depicted the sole example of Evans, Type VIII, C 3, from the Warren hoard, with the name of **ΑΓΓΟΛ** taking the place of **ΑΡΙΣΤΟ**. A specimen of this very rare variety in the writer's collection weighs 6.41 gm. The average weight of 67 uncleaned horsemen of Types Nos. 16 to 21 is c. 6.33 gm., with a range from 5.99 to 6.58 gm. A tentative frequency table, drawn from the weights noted by Dr. K. Regling, for the above 67 didrachms, shows that the norm was about 6.46 gm. Following again Sir Arthur's principle expressed above, the well-known monogram **ΝΚ** must represent the engraver's signature. It is remarkable that once more, as in the case of the Thurium artist **ΜΟΛΟΞΞΟΞ**,²⁰ a plated coin will give us direct and contemporary evidence of the otherwise probable reading of the above monogram. On the plated coin depicted **Pl. X (A). 10** as Warren-find

²⁰ Cf. E. S. G. Robinson, *Num. Chron.*, 1927, p. 201.

Type No. 13, in the writer's collection (weight 5.82 grm.), the magistrate's name **ΦΙΛΟΚΡΑ** is engraved **И•ΚΙΑ**, and the monogram **ΝΚ** replaced by the rather complicated **ΑΚ**, which obviously can be only read **ΝΙΚΑΡ**, the loop of the **Ρ** being represented by a dot, as is the omicron in the blundered rendering of the magistrate's name.

The signature **ΝΚ** (**ΝΙΚ**) during the whole horsemen-coinage is to be met with only on the Types Nos. 11 to 21; it appears, however, very frequently on a great number of Tarentine gold coins under more or less abbreviated forms such as **ΝΚ**, **ΝΝ**, **ΝΙΚ**, and **ΝΙΚΑΡ**. That Nikar. (Nikarchos?) was an engraver has often been expressed by various writers³¹ without, however, giving any cogent justification for their conclusion, which is in contradiction to Dr. Barclay Head's opinion,³² who considered **ΝΙΚΑΡ** to be a civic magistrate.

As the writer no longer shares the latter view, and the question being important, he will here examine the question *ab ovo*.

The signature **ΝΙΚΑΡ** is to be first met with on two Tarentine gold staters of Macedonian types displaying on the obverse the head of the youthful Herakles and the biga on the reverse (cf. **Pl. XI (B). 9** and **10**). The first of these staters³³ was dated thirty years ago by

³¹ Cf. A. Dieudonné, *Revue Num.*, 1905, pp. 66 and 67; and H. de Nanteuil, *Collection de Monnaies Grecques*, 1925, p. 115, No. 116.

³² Cf. *Historia Numorum*², p. 58; *Coins of the Ancients* (1889), p. 66, No. 15.

³³ Five specimens, all from the same dies, are known: (a) Paris (**Pl. XI (B). 9**); (b) London (*B.M.C.*, No. 12 = A. J. Evans, *Pl. V. 11*); (c) Brussels (Baron L. de Hirsch); (d) R. Jameson (*Cat. Jameson*, *Pl. VIII*, No. 158) = Hirsch XXI, Munich sale (Consul Ed. F. Weber)

the writer, following Sir Arthur Evans, c. 315 B. C., the second c. 302-281 B. C. More recently W. Giesecke has placed both staters in his group IV (c. 283-281 B. C.) which includes also two other varieties of the Herakles staters (cf. M. P. Vlasto, *J.I.A.N.*, 1899, Types O. 1, 2, 3, 4 and Type X. 1).

The writer had accepted, for his above dating, the evidence of the famous Taranto 1883 find of gold coins, deposited c. 315 B. C., *as given by* Sir Arthur Evans (cf. *l. c.*, p. 97), without, however, being able to consult the analysis of this find published by L. Viola in *Notizie degli Scavi* (1886, p. 279), this periodical not having been available to him before 1902. Sir Arthur Evans's generalization with regard to the four Herakles Tarentine gold staters from this find was sufficient for the scope of his work, but is very misleading when each of these four staters, *all of different types*, is more closely examined. The late L. Viola, though an able archaeologist, not being a trained numismatist, has in his detailed account made some very excusable mistakes; his descriptions, however, are clear enough to be easily corrected, and the writer has since been able to identify, beyond doubt, the present location of the seven gold Tarentine staters from this find, which were at first purchased by the late Mr. Stevens of Naples from the finder, Cataldo Grecucci, and sold later to well-known coin-dealers.

For the sake of easy reference I shall give hereunder a summary description of the four Herakles staters according to L. Viola's numbering and sequence, which, as we shall see, is not chronologically quite correct:

Pl. II. 280; (e) M. P. Vlasto = Osborne O'Hagan, Sotheby sale, (1908), Pl. I, No. 25).

No. 1. Head of young Herakles,³⁴ in high relief, r., wearing lion's skin.

Rev. Biga r., driven by Taras wearing chlamys and holding reins and trident, above star of eight rays; beneath dolphin downwards r., below horses ΚΑΗ (read by L. Viola ΝΑΗ). The exergue, represented by an uneven line, has been described by L. Viola as a spear-head.

A, 18.5 mm., wt. 8.58. Almost *f.d.c.* Purchased by the Baron L. de Hirsch and now at Brussels (cf. M. P. Vlasto, *J.I.A.N.* (1901), Pl. S' 4).

No. 2. Head of Herakles,³⁵ &c., to r. in low relief.

Rev. (ΤΑΡΑΝΤΙΝΩΝ off-field) Biga, &c., to r., beneath horses, ΑΙ (misprinted in S. Viola's description ΑΙΡ), below thunderbolt.

A, 17 mm., wt. 8.57. Fine but somewhat worn. Now in the writer's collection (cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IH' 22).

³⁴ Only one other specimen from the same dies is known, now in the Fitzwilliam Museum at Cambridge, cf. S. W. Grose, *Cat. of the McClean Col.*, vol. i, Pl. 23, No. 21. A' 18 mm., wt. 8.53 = Late Collector, Sotheby, 1900, sale, Pl. I. 21 = G. Sparkes sale, Sotheby, 1880, lot 351 = Pembroke sale (1848), lot No. 291, cf. M. P. Vlasto *J.I.A.N.* (1901), Pl. S' 5. The mint official's signature ΚΑΗ obviously corresponds to the shorter form ΚΑ found on many horsemen belonging to Period V (cf. Evans, Types B. 20, 21, 330-302 B.C.) and to the ΚΑΗ found on Evans, Per. VI, F. 2 engraved by ΕΥ. These gold staters must have been struck very shortly after L. Viola's subsequent No. 3, c. 318-316 B.C.

³⁵ Four other examples from the same dies are known: (a) Paris, cf. J. Babelon, *L.c.*, Pl. X. 244; (b) London (*B.M.C., Italy*, p. 162, No. 10 = Evans, Pl. X. 15); (c) Vienna; (d) ? = Cl. Côte sale cat., Lugano, 1929, Pl. XI. 312 = Sir H. Weber, cf. L. Forrer *L.c.*, Pl. 25, No. 553 = Bunbury sale, Sotheby (1896), Pl. I. 71 = Blacas Coll.

The surprising presence of this stater in the 1883 find is very important and gives us positive evidence that it was struck several years before 315 B. C.

Owing to the flat style of its *obverse* this type had been dated, by B. Head, Sir Arthur Evans, and myself, many years ago, c. 212-209 B. C., during the Hannibalic hegemony at Tarentum, whereas that no gold was issued at Taras after its first occupation by the Romans (272 B. C.) has been since fully ascertained by Dr. K. Regling³⁶ and W. Giesecke and had been previously noted by the writer.³⁷

³⁶ K. Regling, *Ianus Festschrift*, p. 83, Note 1.—W. Giesecke, *It. Num.*, p. 109.

³⁷ Cf. L. Forrer, Cat. of the H. Weber Coll., p. 118, the writer's note following No. 553. The Taranto 1908 find of gold ornaments in a vase containing also Tarentine, Metapontine, and Carthaginian silver coins *all conspicuous from their thin lustrous blue-black patina*, belonging to the Hannibalic standard, further confirmed the writer's opinion, this time by negative evidence, that no gold coins could have been struck at Tarentum during the Hannibalic occupation (212-209 B. C.). It may be noted here that the analysis of this find, as given in *Num. Chron.*, 1909, pp. 253-263, is not quite complete and the writer has been able to ascertain since, that about 27 more Tarentine units with three half-units, as well as *four Metapontine units with three half-units* and a few Punic half-units, *from the same find with the same unusual patination*, had reached other hands before this hoard came under his notice. In order to get over the above positive evidence and justify the early date (319-283 B. C.) W. Giesecke now proposes for the above Metapontine half-units, he writes, (p. 100, Note No. 1 of *It. Num.*) "Wie sie in den Fund geraten sind, ist unklar"! An example of the Metapontine half-unit, depicted Pl. 13, No. 11 of W. Giesecke's *Italia Numismatica*, only renders more obvious the falsity of the Metapontine unique gold coin, now at Berlin, figured on the same Plate (No. 1). Leaving aside the ugly un-Greek style of the obverse of this coin, its absurd symbol, reproducing the well-known d'Este collection countermark, its ill-drawn border of dots, and considering the accuracy of ancient Greek observation in such matters, the im-

No. 3. Head of Herakles, in very high relief, &c., to r.

Rev. Biga, &c., to r. In f. above eight-rayed star. In f. to r. beneath horses, dolphin downwards.

A, 18 mm., wt. 8.579. Extremely fine, now in the writer's collection.³⁸ (Purchased by a coin-dealer from Mr. Stevens at Naples) (cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IS' 9 and *Num. Chron.*, 1926, Pl. XI, 15).

No. 4. Head of Heracles,³⁹ &c., to r. (beneath his neck to l. club).

Rev. Biga, &c., to r. *In exergue*⁴⁰ ΤΑΡΑΝΤΙΝΩΝ. In f. above ΝΙΚΑΡ (read by L. Viola ΝΙΚΑ).

possible attaching of two ears of barley to one stalk and the bow-like double bend of the leaf to right, unparalleled in all the Metapontine coinage, are sufficient in the writer's opinion absolutely to condemn this coin.

³⁸ The only other example known, from the same dies, is in the British Museum (*B.M.C. Italy*, p. 162, No. 13), cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IS' 9.

³⁹ Only three other *genuine* examples from the same dies are known: (a) London = *B.M.C. Italy*, p. 162, 11; (b) Berlin, cf. Dressel, *Beschr.* III, Pl. X. 152; (c) A. H. Lloyd = Lucerne Hirsch VI sale (1923), Clarence S. Bement, Pl. 3. 86 = Paris 1913 sale (Maxime Collignon ex Hubert), Pl. I. 18 = G. Nervegna Rome 1907 sale, Pl. II. 245. Very clever spurious copies of this latter stater came into the coin market from Naples shortly after 1914 and were passed as genuine by many good connoisseurs and experts. The six staters (one of which was included in the Paris 14th February 1923 sale, G. Picard) which came under my notice were from the very beginning condemned by me as modern forgeries, and this opinion has since been fully confirmed (1922) by the British Museum authorities. These six spurious staters, all from the same pair of dies, were said to have come from a purported find from Lecce or Grottaglie.

⁴⁰ Had not L. Viola said in his description of No. 4 *nell'esergo* ΤΑΡΑΝΤΙΝΩΝ, one could have followed Sir Arthur Evans

A', 18 mm., wt. 8.54, fine but slightly worn, now in the writer's collection (cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IS'. 13).

Owing to the bad centring of the obverse, L. Viola did not describe the club, which is off-field, and the last letter of **NIKAP**, the **P** being somewhat indistinct (for a perfect example of this type cf. Pl. XI (B). 10, Brit. Mus.).

The other three Tarentine staters included in this find were of the two beautiful well-known types with the Dioskuri on the reverse, all signed by the engraver **ΞΑ**.

L. Viola's Nos. 5 and 7 are from the same dies as Evans, Pl. V. 9: the first of them is still in Mr. Claudius Côté's collection (= Lt.-Col. Ellis = Late collector, Sotheby, 1900 sale, Pl. I. 20 = Montagu, Sotheby, 1896 sale, Pl. I. 16) and the second at Brussels (ex Baron L. de Hirsch collection). No. 6, the very rare variety with two stars in place of the inscription **ΔΙΟΞΚΟΡΟΙ**, is now in the writer's collection (ex the late Mr. P. Mathey's collection, who purchased it from a friend of Baron L. de Hirsch). The three last staters were the only ones in brilliant *f. d. c.* condition and obviously were struck after the four Heracles staters, which were, as to preservation, as described above, though L. Viola had termed them all *fior di conio*. My friend Mr. Sidney P. Noe of New York had kindly drawn my attention by letter (31 Aug. 1920) to the

(cf. Evans, p. 98, and Pl. V. 11) and identified this stater as the one depicted here, Pl. XI (B). 9, on which there is no exergue. Only one other Herakles gold stater is known with an exergue, the unique stater now at Berlin (ex. Imh. Blumer), cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IS'. 10.

importance of fixing the correct date of the Herakles-biga staters from this find, which contained also 80 gold staters of Philip II in moderate condition, and 5 staters of Alexander in good preservation. Mr. Noe also informed me that, from Mr. E. T. Newell's knowledge of certain of the Alexandrine pieces described by L. Viola, they were struck about 323 B.C., which makes the dating arrived at by Sir Arthur (315 B.C.) for the concealment of this find probably correct, and the writer is obliged to agree now with Mr. Noe's further suggestion that the Heracles stater (No. 2) formerly assigned to 212-209 B.C., bearing Alexander son of Neoptolemos's signet, the *thunderbolt*, should be, following the positive evidence of this find, removed back to the Molossian's time (c. 332 B.C.), thus confirming once more how misleading it is to date coins only on the evidence of their style. The Herakles group of staters is just the form one would expect from the domineering Alexander, and the inscription $\mathcal{A}\Pi$ ⁴¹ on stater No. 2 points to the same conclusion, $\mathcal{A}\Pi$ being an obvious alternative of the monogram $\mathcal{A}\Pi$ ($\mathcal{A}\Pi$) only to be met with on some of the Molossian horsemen (cf. Evans, Pl. VI. 1 and 2) struck 334-330 B.C. On the two beautiful Heracles staters Nos. 1 and 3, the former of which is signed $\mathcal{K}\Lambda\mathcal{H}$, without the ethnic, the reference to the Tarentine mint though slender is obvious by the presence beneath the biga of the small dolphin, which is the real totem or hieroglyph of Taras, the abbreviation of its well-known

⁴¹ This new dating of this gold stater No. 2 shows that this signature, probably of a moneyer $\mathcal{A}\Pi$, is not to be confounded with the magistrate $\mathcal{A}\Pi$, of the later gold and silver Tarentine coins struck during the Pyrrhic hegemony (cf. above, p. 123), often associated with the spear-head symbol.

παράσημον. Owing to the extremely fine condition of these two all but unique staters, their issue may be safely dated about two or three years before the Dioskuri staters, which were fresh from the mint at the time of their concealment.

Sir Arthur Evans has shown that the type of the reverse of these latter staters⁴² commemorates the alliance between Taras and its mother city and conveys a clear reference to the renewed brotherhood in arms entered into with the Spartan Prince Akrotatos c. 314 B.C.

The positive evidence of the Taranto 1883 find allows the writer to date c. 322 B.C. the stater No. 4 (PL XI (B). 10) signed **NIKAP**. The style of this coin is purely Macedonian and no doubt inferior to the other stater, signed also **NIKAP**, depicted PL XI (B). 9, which is a beautiful copy, in high relief and of charming Tarentine style, from the Herakles stater with the thunderbolt symbol, struck as we have shown during the Molossian's hegemony at Taras, and the work of an inferior engraver. Though Nikar. is a very clever artist he is wanting in originality, and the variations of his style can be best explained by his adaptation to the various prototypes from which he drew his inspiration. This peculiarity of his talent will become still more evident

⁴² As many as eighteen examples of these staters with **ΔΙΟ-ΣΚΟΠΟΙ** on the reverse are known to the writer, nine of them, in brilliant mint state, coming from the Monteparano (near Taranto) 1905 find (cf. S. P. Noe, *l.c.*, p. 135). Only five specimens with the two stars on the reverse are known: (a) London (*B.M.C.*, p. 160, No. 5); (b) Glasgow, cf. Macdonald, *Cat. of the Hunter Coll.*, vol. i, p. 67, No. 18; (c) Florence = Carelli *N.I.V.T.*, CIII, 11; (d) Berlin ex Löffbecke Coll.; (e) M. P. Vlasto from the Taranto 1883 find = Garrucci T. C. 53.

when we consider the numerous dies last signed by him during the Pyrrhic hegemony.

The next coin signed **NIK** is the exceedingly rare gold third of a stater depicted **Pl. XI (B). 13**. Only two examples are known, struck⁴³ from the same pair of dies, though of very different fabric; the obverse-die of this type is found coupled with a slightly earlier unsigned reverse⁴⁴ (cf. **Pl. XI (B). 11, 12**), also of the highest rarity, which may be the work of Nikar, though possibly only the prototype copied by him. The above coins and the kindred better-known thirds of staters,⁴⁵ with the usual biga taking the place of the biga drawn by dolphins, and with the eight-rayed star and dolphin symbols, belong obviously to the same issue as the Herakles stater No. 3, of the Taranto 1883 find, but owing to the fact that two obverse dies and four reverse dies⁴⁶ are known for these last thirds of staters, their issue may have been continued possibly until 300 B.C.

No mention has been made so far of the Heracles gold half-staters hitherto considered contemporary

⁴³ The coin figured **Pl. XI (B). 13** formerly in the Löffbecke Collection is now at Berlin, *N* 14 mm., wt. 2.83 (cf. M. P. Vlasto, *J.L.A.N.* (1889), Pl. IH'. 12), as well as the sole other example known from the same pair of dies, *N* 12.5 mm., wt. 2.8 (*Beschr.*, No. 23, Pl. X. 158, and M. P. Vlasto, *l.c.* Pl. IH'. 11).

⁴⁴ Only three examples are known: (a) Paris = M. P. Vlasto, *l.c.*, Pl. IH'. 9; (b) Paris, de Luynes Coll. = here **Pl. XI (B). 11**; (c) M. P. Vlasto, here **Pl. XI (B). 12**. The two staters of the 1883 find, Nos. 1 and 3, may possibly be unsigned dies engraved by Nikar.

⁴⁵ Cf. M. P. Vlasto, *l.c.*, Pl. IH'. 13; Evans (Pl. X. 16): twelve examples, all from the same pair of dies, are known to the writer.

⁴⁶ Cf. M. P. Vlasto, *l.c.* (1899), Pl. IH'. 14 and 15. A fourth reverse die coupled with this second obverse die, with a five-rayed star, is known by two examples, one at Berlin, the second in the writer's collection. The last three varieties are of the highest rarity.

with the staters of same type, many of which are signed on their reverse **NIKAP** (cf. Pl. XI (B). 14, 15) or **NK** (cf. Pl. XI (B). 16, 17).

Cav. Quintino Quagliati, the erudite keeper of the Taranto Museo, has quite recently published in *Rassegna Numismatica* (Oct. 1929, p. 355) a highly important find, discovered at Taranto on the 14th August 1929, of 8 gold Tarentine half-staters, 53 horsemen, all of the full standard, one nomos of Herakleia, and 21 Metapontine didrachms. The latest Tarentine horsemen represented in this find were 12 examples of Evans (Period VI), Type A 1, 4 of Type A 3, and 5 of Type A 4, which makes it probable that the actual deposit did not occur till a short time before 281 B.C. Unfortunately Cav. Q. Quagliati does not give any details regarding the condition of the 8 gold half-staters, which belonged to two types. Three were of the earliest issue⁴⁷ displaying: **TAPANTINΩN**, Head of Hera(?) r., wearing stephane, earring, and necklace; behind head **E**, border of dots. **R TAPAZ**, Taras seated on dolphin l., carrying small dolphin and trident; below **PK**. The five other half-staters were of the following well-known type: **A9AT**. Head of Satyra (?) l., wearing earring and necklace, hair bound with two cords crossing and tied at the back of the head, under chin dolphin downwards, r., beneath neck signed **ΞA**: border of dots. **R** Taras seated on dolphin l., wearing chlamys and carrying wreath-bearing Nike and trident: below **HH** and waves.^{47a}

⁴⁷ Cf. M. P. Vlasto, *l.c.* (1899), Pl. IE'. 10, but it is possible that all three belonged to the somewhat later and very rare Molossian issue, as M. P. Vlasto, *l.c.* (1899), Pl. IE'. 20, Cav. Q. Quagliati having only described in a summary way their types.

^{47a} Cf. M. P. Vlasto, *l.c.* (1899), Pl. IS'. 6. (These half-staters are

The latter half-staters belong certainly to the last issue of the gold staters,⁴⁸ with the veiled head of Hera (?) to left, of rather flat style, coupled with the androgynous horseman crowning his horse to r., and with the star and dolphin symbols, signed ΣA , and no doubt correctly dated by Sir Arthur Evans c. 300 B.C. That this rather plentiful issue⁴⁹ of gold half-staters is anterior in date to those presenting the youthful Herakles clad in the lion's skin, is probable from their absence in the above recent find. This is however only negative evidence, but the writer is fortunate enough to be able to show now, by positive evidence, that the Herakles half-staters belong to the very important last issue of gold coins, almost all signed by Nikar., struck at Taras during the Pyrrhic Hegemony when gold was needed in large quantities in order to defray the expenses of Pyrrhus's Italian enterprise and possibly also to fill his private war-chest.

Early in the year 1926 there appeared almost simultaneously on the London, Paris, New York, and Geneva coin markets a few varieties of the magnificent and in most cases extremely rare Pyrrhic Tarentine gold staters displaying on their obverse the laurel-crowned head of Zeus Eleutherios and on their reverse the eagle on a thunderbolt (in all, 12 staters). With these staters were also offered for sale fourteen half-staters of the Herakles-biga type, a few quarter-staters (Head of Apollo, Σ , eagle on thunderbolt), and one example

all struck from one obverse die, coupled with two slightly varied reverse dies). Cf. Lucerne XV Sale (1930), Pl. 3. 83, 84.

⁴⁸ Cf. M. P. Vlasto, *l.c.* (1899), Pl. 18^v. 5. (One obverse die and two reverse dies.) Sixteen examples of these staters are known to the writer.

⁴⁹ Twenty-seven examples have so far been noted.

of the extremely rare gold $\frac{1}{8}$ of stater depicted here, **Pl. XII (C). 17**. All the coins were more or less incrustated with a very tenacious calcareous sediment yielding only to strong acid, fortunately without injuring the surface of the coins, which all obviously came from a single recent find. As usual dealers were more than reticent on their provenance, and so far the writer is unable to give any information with regard to when and where they were found. Most of these coins were eagerly purchased by well-known collectors, and the writer was fortunate enough to be able to secure, from four different dealers, five varied staters, one half-stater (**Pl. XI (B). 17**) and the $\frac{1}{8}$ -stater for his collection. As is always the case in similar finds, the half-staters and quarter-staters were from very fine to fine, and not as brilliantly preserved as the staters, owing to their much wider circulation.

The following list may be taken as an up-to-date corpus of the Tarentine staters of the Pyrrhic issue described in their probable chronological succession. The new examples from the find, which for future reference the writer will call the "1926 find", are marked with an asterisk.

Type No. 1. Head of Zeus Eleutherios to r. in high relief, his beard and hair in rather formal curls. In f. to l. signed **ΝΚ (NIK)**.

Rev. **ΤΑΡΑΝΤΙΝΩΝ** ↑ in f. to l. (inwards). Eagle to l., wings open, on thunderbolt. In f. to l. **Α (AP)**.

(a)* *N*, 17.5 mm., wt. 8.54; very fine (*Commerce*, 1926), from the same dies as (b) *M. P. Vlasto, N*, 17.5 mm., wt. 8.59 [**Pl. XII (C). 1**], cf. *M. P. Vlasto, J.I.A.N.* (1899), Pl. IZ'. 10 = F. Imhoof-Blumer Coll. = A. Hess, 26 Oct. 1902 sale of Berlin duplicates,²⁰ Pl. I. 200 = P. Dupré, Paris, 1867 Sale, lot 10, cf. Carelli, ciii. 2.

²⁰ It is surprising that the Berlin cabinet should have parted

Type No. 2. Similar, but of still higher relief. In f. to l. signed \mathbf{NK} .

Rev. $\mathbf{TAPANTIN\Omega N}$ \curvearrowright in f. to r. (inwards). Same type, but in f. to l. (in place of $\mathbf{\mathcal{A}}$) a small Pallas *Pro-machos* advancing to l., her l. leg drawn backwards, wearing long chiton and chlamys.

(a)* *N*, 17.5 mm., wt. 8.55 [Pl. XII (C). 2], M. P. Vlasto; (b)* *N*, 17.5 mm., wt. 8.54, R. Jameson. Both these staters extremely fine and from the same dies as (c) Berlin (*Beschr.*, Pl. X. 153) = Evans, *l.c.*, Pl. V. 17; (d) Glasgow (Hunter, Macdonald, Pl. V. 6), ex. P. Dupré, lot. 11; (e) Naples (purchased during 1900, cf. *Not. d. Scavi*, p. 656 (1900)).

Type No. 3. Similar, but head turned to left, the hair more flowing. In f. to r. \mathbf{NK} .

Rev. $\mathbf{TAPANTIN\Omega N}$ \downarrow in f. to r. (inwards). Same eagle, &c., but turned to r. In f. to r. two amphorae with lids. In f. to l. ϵ above eagle's r. wing signed in minute letters \mathbf{NIKAP} .

(a)* *N*, 19 mm., wt. 8.60 [Pl. XII (C). 3], extremely fine, M. P. Vlasto; (b)* *N*, 17 mm., wt. 8.54. Very fine, but rev. somewhat worn (*Commerce*); both staters from the same dies as (c) Naples (cf. Fiorelli, *Cat. of the Santangelo Coll.*, no. 22), cf. M. P. Vlasto, *l.c.*, Pl. IZ. 4; (d) Berlin, ex. Imhoof-Blumer = P. Dupré (1867), No. 12, cf. M. P. Vlasto, *l.c.*, Pl. IZ. 6; (e) London (*B.M.C., Italy*, No. 3), cf. M. P. Vlasto, *l.c.*, Pl. IZ. 5.

Type No. 4. Similar, of softer style. In f. to r. \mathbf{NK} .

Rev. $\mathbf{TAPANTIN\Omega N}$ \curvearrowright in f. to r. (inwards). Same type, but in f. to l. above Φ and to r. above the two

with this, then unique, stater, which must not be mistaken for the type No. 7 with the magistrate's name $\mathbf{\Xi\Omega\Xi I}$. The new example (a) from the 1926 find, with the reverse out of centre, leaving a large part of the field bare above the left wing of the eagle, makes it certain that this reverse die is without any magistrate's name. The writer however was also unable, thirty years ago, to separate one type from the other, distinction of dies being then in its infancy.

amphorae *without* lids, two eight-rayed stars. In f. beneath thunder-bolt signed **NIKAP**.

(a)* *A*, 18.75 mm., wt. 8.57 [Pl. XII (C). 4], *Commerce*, 1926; (b)* *A*, 18 mm., wt. 8.60 [Pl. XII (C). 5 obverse only], M. P. Vlasto. Both almost *f. d. c.* and from the same dies as (c) London (*B.M.C., Italy*, 2); cf. M. P. Vlasto, *l. c.*, Pl. IZ. 3; (d) Taranto Museo = Nervegna Sale, Rome, 1907, Pl. II. 243. The stater withdrawn from the Hartwig Sale (Rome, 1910), if genuine(?), was tooled beyond recognition.

Type No. 5. From the *same die* as above.

Rev. Similar type, &c., without **ΦΙ**.

(a) London (*B.M.C., Italy*, No. 1 not fine); (b) Paris, de Luynes, cf. J. Babelon, *l. c.*, Pl. X. 243; (c) M. P. Vlasto = Montagu, Sotheby (1896) Sale, Pl. I. 20. The obverses of these last two staters being out of centre the reverse only of (c) is figured [Pl. XII (C). 5], coupled with the obverse of (b) (from the same die) of type No. 4, from the 1926 find, in the writer's collection (cf. above).

Type No. 6. Similar, but of bold and less detailed style and of lower relief. In f. to l. **ΝΚ**.

Rev. **TAPANTINΩΝ** ζ in f. to l. (inwards). Similar eagle, of rather weak style, turned to left. In f. to l. owl with closed wings, three-quarters facing to l. In f. to l. above eagle's l. wing **ΞΩΚ**.

(a)* *A*, 17.5 mm., wt. 8.58 [Pl. XII (C). 6]. M. P. Vlasto.

(b)* *A*, 18 mm., wt. 8.58. E. T. Newell.

(c)* *A*, 17.5 mm., wt. 8.57. C. S. Gulbenkian.

(d)* *A*, 18 mm., wt. 8.56. R. Jameson.

The above four staters in almost brilliant condition from the same dies as (e) Vienna (cf. M. P. Vlasto, *l. c.*, Pl. IZ. 7); (f) W. H. Woodward? (E. S. G. Robinson, *Cat. of Woodward Coll.* (1928), Pl. I. 9) ex. M. P. Vlasto Coll. = Nervegna Sale, Rome, 1907, Pl. II. 244 = Lucerne XV Sale (1930), Pl. 4. 103.

Type No. 7. Same type, but the head turned to right, in very high relief and of gem-like style. In f. to l. **NK**.

Rev. **TAPANTINΩN** ↑ in f. to l. (inwards). Same type of beautiful gem-like style. In f. to l. (in place of owl) **Α**. In f. to r. above eagle's l. wing **ΞΩΞΙ** ↘.

(a)* *N*, 17.5 mm., wt. 8.59 [Pl. XII (C). 7]. M. P. Vlasto. This splendid stater is in absolutely brilliant *f. d. c.* condition and from the same dies as (b) Berlin ex Löbbecke Coll. = Bunbury Sale, Sotheby, 1896, Pl. I. 72, from the Hamilton Collection; (c) A. H. Lloyd = Bement (1923), Lucerne VI Sale, Pl. I. 11 = Hirsch, xxvi (1910), Pl. I. 16 = Hirsch, xxx (1893), Pl. III. 93 = Berlin, *Beschr.*, iii, p. 226. 10; (d) Boston (cf. *Mus. of Fine Arts Bull.*, No. 30, p. 67. 4); (e) ? = Cl. Côte Sale Cat., Pl. XII. 360, ex. M. P. Vlasto = T. H. Ionides and G. Simpson collections; (f) W. H. Woodward, cf. E. S. G. Robinson, *l. c.*, Pl. I. 8, ex. M. P. Vlasto Coll. = Hirsch, xxvi (1910), Pl. IX. 169.

Type No. 8. Same type, of different style and lower relief, signed in f. to l. **NK**.

Rev. **TAPANTINΩN** ↗ in f. to l. Same type, of different style and low relief, the eagle turned to right. In f. to r. above thunderbolt Tarentine helmet, without crest, with flaps above which signed **NK** (somewhat indistinct owing to a break of the die). In f. to r. **ΑΡΟΛ** ↘ (inwards).

(a) *N*, 17 mm., wt. 8.58 [Pl. XII (C). 8]. Berlin ex. Rauch Coll. (cf. *Beschr.*, p. 226, No. 11, Pl. X. 154.

Type No. 9. Same from another die, of higher relief and rather poor style.

Rev. Same, from another die without the signature **NK**.

(a) *N*, 17.5 mm., wt. 8.56 [Pl. XII (C). 9]. British Museum (*B.M.C., Italy*, p. 160, No. 4), cf. M. P. Vlasto, *l. c.*, Pl. IZ. 15.

Type No. 10. Similar, but the hair and beard more flowing, the relief very high and the style distinctly Locrian without the signature **NK**.

Rev. ΤΑΡΑΝΤΙΝΩΝ Ϛ in f. to l. Eagle on thunder-bolt turned to left with *both wings shown*.

(a) *A*, 19.4 mm., wt. 8.55 [Pl. XII (C). 10]. Paris, cf. M. P. Vlasto, *l.c.*, Pl. IZ'. 13.

Hereunder will be found the summary of all the gold coins from the 1926 find, which, so far, have come under the writer's notice; it may, however, be mentioned here that, from recent information, the writer understands that two, possibly four more staters (Types No. 4 and/or No. 6?), with a few half-staters, are still held in private hands and, as usual, further leakages are possible.

<i>Gold Staters.</i>	<i>No. of specimens.</i>	
Type No. 1. (Pl. XII (C). 1, not from the find)	1	
Type No. 2. (Pl. XII (C). 2*)	2	
„ 3. (Pl. XII (C). 3*)	2	
„ 4. (Pl. XII (C). 4* and obv. of 5*)	2	
Type No. 6. (Pl. XII (C). 6*)	4	
„ 7. (Pl. XII (C). 7*)	1	Total of staters 12

Gold Half-Staters.

Cf. M. P. Vlasto, *J.I.A.N.*, *l.c.* :—

Pl. IS'. 14 and 19 (both from same pair of dies)	5	
Pl. IS'. 15	1	
Pl. IS'. 17 (here Pl. XI (B). 16, not from the find)	6	
Pl. IS'. 18 (Pl. XI (B). 17*)	1	Total of half-staters
Pl. IH'. 23	1	14

Gold Quarter-Staters.

Pl. IZ'. 17	1	
„ IZ'. 19	1	
„ IH'. 6	2	Total of quarter-staters
„ IH'. 7	1	5

Gold $\frac{1}{8}$ -Stater.

Pl. IH'. 16-19 (Pl. XII (C). 17*)	1	$\frac{1}{8}$ -stater	1
Total	32	Total	32

The main types of these gold staters, as pointed out by Sir Arthur Evans, are characteristically Epirote and have been referred with confidence to the time of Pyrrhus's expedition; there is no doubt, however, that if we are to seek for their prototypes we must turn also towards the contemporary Ptolemaic coinage, silver and especially bronze.⁵¹ We know from Justin that Ptolemy Keraunos supplied five thousand foot soldiers, four thousand horsemen, and many elephants, thus helping Pyrrhus's Italian enterprise, and it is more than probable that these mercenary forces brought with them no little amount of Ptolemaic currency.

The 1926 find, in which were represented all the known varieties of these gold Pyrrhic staters, with the probable exception of only four types (Nos. 5, 8, 9, 10), makes it certain, owing to their general beautiful preservation, that their issue was strictly contemporary and that in order to insure a larger output a great number of dies must have been used simultaneously as the best way of increasing the rate of minting of coins. The opinion that this class of Tarentine staters is posterior in date to the Heracles-bigā staters is thus once more confirmed by the absence of the latter from this find.

The slightly worn condition of the stater included in the 1926 find, described under type No. 1, justifies its position at the head of this issue. This all but unique stater is no doubt the first one engraved by Nikar. for the Pyrrhic issue, and its style has all the characteristics of a prototype and strongly recalls the

⁵¹ Cf. J. Svoronos, *Tὰ Νομίσματα τῶν Πτολεμαίων*, Pl. XI, XII.

masterpieces in gold and silver almost certainly engraved by the Tarentine artist **KAA** for Alexander the Molossian,^{51a} when Nikar. must have been very young. The expressive head of Zeus, signed **NK**, the proud eagle with expanded wings (Pl. XII (C). 1), are works of considerable merit worthy of a better age. The monogram **R**, on the reverse, belongs obviously to the civic magistrate whose name has been identified above with **API** and **APIΞΤΙΝ** on the early Pyrrhic horsemen of the reduced standard.

The corresponding issue of Herakles gold half-staters, signed on their reverse **NK** and **R**, was represented by several examples in the 1926 find (cf. Pl. XI (B). 16).

It may be noted here that the heads of the horses drawing the biga on the reverse of these half-staters are adorned with the remarkable top-knots terminating in a knob, to which the attention of the reader has been called (cf. Pl. XI (B). 16) when describing the Warren horsemen, Nos. 11 to 21, thus confirming again, by internal evidence, the opinion that both issues were strictly contemporary.

The corresponding very rare quarter-staters of this issue were also represented in the find by two rather worn examples.⁵²

The second type of Pyrrhic staters, of which two beautiful examples were included in the find, are of the famous and very charming variety (Pl. XII (C). 2), with the symbol of Pallas Promachos⁵³ as she appears

^{51a} Cf. M. P. Vlasto, "Alexander son of Neoptolemos", *Num. Chron.*, 1926, p. 206, and Pl. IX. 6-9 and 12 to 15.

⁵² Cf. M. P. Vlasto, *J.L.A.N.* (1899), Pl. IH'. 6.

⁵³ Cf. G. F. Hill, *Historical Greek Coins*, p. 108, and Dr. Alfred von Sallet, *Das Königliche Münzkabinet*, Berlin, 1877, p. 188, No. 707.

on the well-known coins struck by Pyrrhus himself in Syracuse.⁵⁴ J. Svoronos, as recorded by E. T. Newell,⁵⁵ considers this archaistic statue of Pallas as the copy of some well-known Palladium, the protectress of cities and symbolic of their freedom, and the eminent American numismatist adds: "This particular type was adopted by Ptolemy, by Pyrrhus and by Demetrius to symbolize their favourite policy of obtaining freedom for Greek cities, such cities as happened to belong to some one else."

The beautiful gem-like style of the obverse, signed **NK**, its extraordinarily high relief, the minuteness of detail, and the microscopic character of the engraving of the eagle's feathers and of the small Pallas symbol, show Nikar's art at its best when this capable though then aged engraver had under his eyes the well-known and famous statues of Herakles and Zeus by Lysippus. The late Adolphe Reinach⁵⁶ has shown that the activity of this great sculptor at Taras must be dated c. 315-306 B.C.

No doubt Nikar. must have also been particularly proud of the beautiful reverse-die he engraved for the following stater, type No. 3, which offers the only instance of his signature **NIKAP** *en artiste*, in almost microscopic letters (Pl. XII (C). 3). This stater as well as two Herakles gold half-staters belonging to the same issue (cf. Pl. XI (B). 14, 15), also signed **NIKAP** on their reverse, are associated with the symbol of the two amphorae, a well-known badge of the Dioskuri, occurring also on the contemporary issue of Horsemen (Evans,

⁵⁴ Cf. Evans, *l.c.*, p. 140.

⁵⁵ *The Coinages of Demetrius*, 1927, p. 38.

⁵⁶ Cf. *Neapolis*, 1913, p. 28.

VII, Types C. 5, 6, 7), *copied* as shown above by Nikar. (cf. the Warren horsemen, Nos. 11 to 15, signed **ΝΚ**).

On the following gold staters of Types Nos. 4 and 5 (Pl. XII (C). 4 and 5), sharing the same obverse-die, the signature **NIKAP** is traced in slightly larger letters⁵⁷ beneath the thunderbolt: this position, as in the case of the great Euaenetos, had for result that the signature is very often missing, being off the flan. On the reverse of these staters the twin stars of the Dioskuri are figured above the two tall amphorae, and on Type No. 4 (Pl. XII (B). 4) the abbreviated signature **ΦΙ** in large letters appears above to the left of the eagle's head. This **ΦΙ** can only be the abbreviation of the civic magistrate's name **ΦΙΛΟΚΡΑ**, noted on the Warren horsemen signed **ΝΚ**, Nos. 16 to 21, and the same conspicuous **ΦΙ** met on the gold Pyrrhic stater No. 4 is also to be seen on a presumably unique contemporary gold half-stater signed **NIKAP** in small letters above the biga (Pl. XI (C). 15) and on kindred quarter-staters, cf. M. P. Vlasto, *J.I.A.N.*, 1899, Pl. IZ'. 17.

The long *hasta* of the **Φ**, with a very short cross-bar (cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. IZ'. 3), is unusual and strikingly similar in shape on both the signatures **ΦΙ** and **ΦΙΛΟΚΡΑ**, the latter to be met with on the horsemen dies bearing Nikar's monogram, a particularity pointing again to identity of handiwork. Notwithstanding Nikar's capacity as an engraver, it may be noted here that his lettering is always rather poor, especially during the rush for the Pyrrhic issues when he must have been quite an old man. His letters,

⁵⁷ It is possible that in this case and others, following the well-known Tarentine custom (cf. Evans, *Num. Chron.*, 1912, p. 40), Nikar. has at times signed also as a responsible monetary official.

especially on his later dies, are at times cut very irregularly and ill drawn, their spacing in the ethnic poor or miscalculated (cf. **Pl. XII (C). 1, 3**). On the all but unique quarter-stater depicted **Pl. XII (C). 14**, Nikar. obviously forgot the **l** and had to add it later, quite close to the **N** of the ethnic **TAPANTINΩN**. His monogram **NK**, at times retrograde **Μ**,⁵⁸ sometimes very accurately designed, is on several dies distorted (cf. **Pl. XII (C). 5, 9, 16**), and is hardly legible on his contemporary gold litrae when placed *to the left beneath the neck* of Herakles.⁵⁹ Although Nikar.'s Pyrrhic issues show many divergences of style, according to the prototype he was copying, they are all technically strikingly similar, and the above epigraphical evidence confirms once more the conclusion that Nikar. is certainly an engraver and not a civic magistrate.

The staters of Type No. 6, displaying on their reverse another well-known Pyrrhic⁶⁰ symbol, the owl, are signed in large conspicuous letters **ΞΩΚ**, an abbreviated form, as shown by Sir Arthur Evans, of the civic magistrate's name **ΞΩΚΡΑΤΗΣ** which occurs on horsemen of the Period VI, struck only a few years before 281 B.C. Five examples of the corresponding gold Heracles half-statiers⁶¹ with the same magistrate's signature **ΞΩΚ** were in the 1926 find.

The following stater of Type No. 7, represented by a single example in the find, is only a slightly later

⁵⁸ Cf. M. P. Vlasto, *J.I.A.N.* (1899), Pl. 12' 16.

⁵⁹ Cf. *Ibid.*, *l.c.* (1899), Pl. 18' 20, 22.

⁶⁰ Cf. *B.M.C., Thessaly to Aetolia*, Pl. XX. 7; for Tarentine gold quarter-statiers belonging to this issue, cf. **Pl. XII (C). 14 and 16**.

⁶¹ Cf. M. P. Vlasto, *l.c.* (1899), Pl. 18' 14 and 19, which are *from the same pair of dies* and not two different types as the writer formerly stated.

version of the prototype No. 1. Owing to the extraordinarily brilliant condition of the example from the find depicted **Pl. XII (C). 7** this stater shows all the peculiarities of Nikar's technique, combining again remarkable relief on the obverse with wonderful minuteness of detail on the reverse. Besides the monogram **Α** of Aristip., these staters are also signed in *large letters* by a new civic magistrate **ΞΩΞΙ**, who is only to be met with on the extremely rare half-staters of the same issue represented also by a single example in the 1926 find (**Pl. XI (B). 17**), and also possibly on quarter-staters under the abbreviated form **ΞΩ**.⁶²

The two following types of staters (Nos. 8 and 9), not represented in the find, show the difference, especially for the obverse die, between master-dies and subsequent dies of hurried work by Nikar.⁶³ They are associated on their reverse with the civic magistrate's name **ΑΠΟΛ**, well known to us from the contemporary Warren horsemen of Types Nos. 11 to 15. Whereas the obverse of Type No. 8 (**Pl. XII (C). 8**) is apparently a very clever copy of a Ptolemaic bronze coin (cf. Svoronos, *l.c.*, Pl. XII, 18, 23), the second obverse die (**Pl. XII (C). 9**) displays hurried and somewhat crude work only paralleled by the Warren horsemen, also signed **ΝΚ** and **ΑΠΟΛ**, depicted **Pl. X (A). 8 (rev.)** and **Pl. XI (B) 3, 6, 7**. The helmet symbol on the reverse of these last gold staters, so ably discussed by Sir Arthur

⁶² Cf. M. P. Vlasto, *l.c.*, Pl. IZ'. 19 and Pl. IH'. 1. In this case **ΞΩ** may however represent the civic magistrate **ΞΩΚ**.

⁶³ The same difference of style can be noted if we compare the hitherto unpublished very charming obverse of the quarter-stater initialled **ΝΚ**, recalling the *manière* of Phidias (**Pl. XII (C). 14**), with the very hurried work of a second obverse die bearing the same signature **ΝΚ** (**Pl. XII (C). 16**).

Evans, recalls the similar⁶⁴ but not identical symbol held in the hand of Taras, on the early Pyrrhic horsemen represented in the Warren find by 59 examples (Nos. 4 to 8). The civic magistrate ΑΡΟΛ (in the fuller form ΑΡΟΛΛΩΝΙΟΞ) must have been a very important mint official, and though his name is not, so far, to be met with on any Herakles gold half-staters, it is, however, conspicuous on the reverse of the all but unique gold quarter-stater, depicted Pl. XII (C). 15, the obverse of which is signed ΝΚ, and on most of the extremely rare⁶⁵ gold eighths-of-

⁶⁴ Although similar to the head-piece held in the hands of Taras (cf. Evans, *Per.* VII, C. 2, 3), the helmet on these gold staters has not the projecting horn of Asiatic type as well defined, and is much more like the Tarentine helmets to be seen on many Tarentine terra-cottas of the fourth and third centuries with or without a crest. The late H. Dressel described this head-dress as a Phrygian helmet (cf. *Beschr.* iii, p. 226, No. 11).

⁶⁵ The five other known genuine specimens, all from the same pair of dies, are figured Pl. IH'. 16, 17, 18, 19 (cf. *J.I.A.N.*, 1899) and *ibid.* (1901), Pl. S'. 12, the latter struck on a large flan, also in the writer's collection; the very low weight (0.70 grm.) of the undoubtedly genuine example in the Duc de Luynes's collection (cf. *ibid.* Pl. IH'. 19) can be explained only by faulty weighing at the mint. The writer does not believe in the authenticity of an example (wt. 1.08) purchased during 1912 by the Vienna cabinet, which is of remarkably flat fabric and from the same obverse die as another specimen, laid aside by the writer (wt. 1.08), coupled with the Vienna reverse die recut. The average weight of the five genuine coins is, excluding the Luynes example, 1.058 grm., with a range from 1.07 to 1.05. The modern dies, in the writer's opinion, are the work of the same clever forger of the spurious Herakles gold staters mentioned above (cf. note no. 39), and of the obviously false gold quarter-stater withdrawn from the Lucerne, Hirsch X Sale, 1925, Pl. I. 44. It may be noted here that the gold coin which once puzzled the writer (cf. *J.I.A.N.*, 1899, p. 340, Pl. IH'. 26) is a very old forgery still to be met with in the South Italian coin markets.

staters (Pl. XII (C). 17), which are at times⁶⁶ signed only \mathcal{R} on their reverses. The name of Apollonios appears also on some exceedingly rare⁶⁷ gold litrae of the same issue, ΑΠΟΛ taking the place of the ethnic beneath Taras on his dolphin, and the Herakles head on their obverses being initialled \mathbf{NK} , beneath his chin to right (Pl. XII (C). 18).

The absence of staters bearing the name of ΑΠΟΛ of Types Nos. 8 and 9 from the 1926 find must not be considered as evidence that they may belong to a later issue. The beautiful quarter-stater, with the obverse signed \mathbf{NK} , figured Pl. XII (C). 12, coupled with the well-known⁶⁸ Pyrrhic reverse inscribed \mathbf{IA} , \mathcal{R} , with the spear-head symbol, *shares the same obverse die* with another quarter-stater, *the reverse of which is inscribed* ΑΠΟΛ with that well-known Tarentine *marque d'atelier* the eight-rayed star (Pl. XII (C). 15),

⁶⁶ The only specimen known is in the Vienna cabinet (A, wt. 1.035), cf. M. P. Vlasto, *l.c.*, Pl. IH'. 20.

⁶⁷ Only three examples, all from the same dies, are known. (a) Paris = *J.I.A.N.*, Pl. 18'. 21; (b) ? = Cl. Côte Sale Cat., Pl. XI. 318 (with ΑΠΟΛ off flan), formerly in the writer's collection, and (c) the example, figured here Pl. XII (C). 18, in the writer's cabinet = A. J. Evans = Engel Gros, Paris 1921 Sale, Pl. I. 3 = Nervegna Sale, Rome, 1907, Pl. II. 255. These gold litrae bearing the name ΑΠΟΛ , which can now be safely dated 281-272 B.C., contradict obviously W. Giesecke's metrological conclusions expressed on p. 109 of his recent *Italia Numismatica*.

⁶⁸ On Pl. XII (C). 11 and 13 are figured two extraordinarily brilliant examples of this type, of which many dies and die-couplings are known, both from the writer's collection, showing the diversity of Nikar's style. The charming head of Apollo of Pl. XII (C). 11 strongly recalls the small heads of Taras on the reverses of the horsemen depicted on Pl. X (A). 3, 9, and Pl. XI (B). 2, whereas the obverse of Pl. XII (C). 13, though obviously by the same hand, has a pathetic expression which reminds us rather of Botticelli's painting than of Hellenic art.

thus confirming the conclusion that both issues were strictly contemporary, and Sir Arthur Evans (*l.c.*, p. 151) has shown that the signature ΑΡΟΛ of these Pyrrhic issues is not to be confounded with the earlier ΑΡΟΛ of Alexander the Molossian's time.

The unique gold stater described under Type No. 10, in the Cabinet des Médailles at Paris, is the only variety of this issue without any inscription or signature excepting the ethnic, and a trained eye can at once see that its style and technique stand quite apart when compared with the stylistic and technical qualities of all the other staters signed ΝΚ or ΝΙΚΑΡ. As noted above, the style of this stater is purely Locrian and the writer very much doubts if these dies can have been cut by a Tarentine engraver. Locri was one of the few cities which sided with the Romans on the arrival of Pyrrhus in Italy. After the victory of Herakleia, Pyrrhus was able to occupy Locri, which became one of his chief strongholds, and it is almost certain that he set up a mint there.

It is quite possible therefore that the above stater, though struck at Taras, may be the work of some Locrian engraver who had previously cut some of the well-known Pyrrhic tetradrachms of strikingly similar style.

The writer has elsewhere (*J.I.A.N.*, 1899, p. 2) drawn attention to the contemporaneity of the issue of the largest-sized and very scarce Tarentine issues of bronze coins with all the above Pyrrhic gold staters. These bronze coins all display on their obverse the same head of Zeus Eleutherios, and the types of their reverses (Nike holding a wreath or a thunderbolt, or crowning a trophy) connect them obviously with the Pyrrhic

Italian venture. As shown by A. Reinach (cf. *Neapolis*, 1913, p. 21), this last reverse-type of Nike crowning a trophy can only refer to the victory of Herakleia. On Pl. XI (B). 18 is figured an apparently unique variety of one of these Tarentine bronze issues, bearing the signature of Nikar., NK, on an obverse almost identical with that of the gold stater depicted Pl. XI (B). 8, coupled again with a reverse inscribed $\Phi I (= \Phi I \Lambda O K P A)$ between the lower part of Nike holding the thunderbolt and her wings,⁶⁹ showing thus that Nikar. may possibly have engraved also some other of these dies not bearing his monogram.⁷⁰ *En résumé* all the preceding observations point distinctly to the conclusion that NIKAP can only be an engraver's name, whose too long *floruit*, c. 328 to 272 B. C., precludes also the possibility of referring this signature to a civic magistrate.

Reverting to the Warren hoard, it may be recalled here that the only other mint represented in this find, besides the Tarentine horsemen, was that of Herakleia, of which city there occurred a single didrachm of the reduced standard (No. 22). This type has been no doubt correctly dated by S. W. Grose 281-272 B. C. (*McClellan Cat.*, No. 855), and must have been struck only shortly before the withdrawal of the hoard from circulation. Taking into account all the conclusions expressed above in this paper, the writer

⁶⁹ This coin, formerly in Sir Arthur Evans's collection, owing to its very thick deep sea-blue patina, appears rather blurred on the Plate. For finer similar but unsigned bronze coins, also in the writer's collection, cf. *J.I.A.N.* (1899), Pl. A'. 5 and 6, and P. Wuilleumier, *l.c.*, Pl. II.

⁷⁰ For another bronze coin probably bearing the signature NK cf. *Berlin Beschr.*, iii, pp. 307, 601.

believes that the occasion of the Warren hoard's deposit is to be sought in the circumstances which attended the Roman first occupation of Taras, 272 B.C.

The writer must express here, once more, his deep gratitude to Mr. G. F. Hill for his kind encouragement in allowing him to publish the Warren hoard, which owing to some new data supplies a valuable contribution to our knowledge of the types and chronology of some Tarentine issues presenting more than one important problem.

MICHEL P. VLASTO.

LIST OF COINS ILLUSTRATED.

PLATE X (A).

1. *A*, 22.5 mm., wt. 7.87 before cleaning, ex Warren hoard (No. 2), Berlin.
2. *A*, 21 mm., wt. 6.41, ex Warren hoard (cf. No. 7), British Museum.
3. *A*, 22.5 mm., wt. 6.54, M. P. Vlasto (cf. note No. 24).
4. *A*, 22.5 mm., wt. 6.52, ex Warren hoard (cf. No. 11), M. P. Vlasto.
5. *A*, 22.5 mm., wt. 6.46, ex Warren hoard (cf. No. 11), British Museum.
6. *A*, 21 mm., wt. 5.55 (plated), ex Warren hoard (cf. No. 11), British Museum.
7. *A*, 20 mm., wt. 6.46 (rev.), ex Warren hoard (cf. No. 12), M. P. Vlasto.
8. *A*, 20 mm., wt. 6.47 (rev.), ex Warren hoard (cf. No. 12), British Museum.
9. *A*, 20 mm., wt. 6.39, ex Warren hoard (cf. No. 13), British Museum.
10. *A*, 20 mm., wt. 5.82 (plated), M. P. Vlasto (cf. Mionnet, *Suppl.*, p. 286, No. 589, and Avellino, *Ital. Vet. Num.*, p. 65, No. 132).
11. *A*, 22 mm., wt. —, ex Warren hoard (No. 14), Berlin.
12. *A*, 22 mm., wt. 5.70 (plated), Vienna.

13. *A*, 20 mm., wt. 6.42 (obv.), M. P. Vlasto (cf. L. Forrer, *Biographical Dictionary of Medallists*, p. 75). (For the rev. cf. *Zeit. f. Num.*, 1895, p. 284.)
14. *A*, 21 mm., wt. 6.50 (obv.), M. P. Vlasto. (For the rev. cf. *Zeit. f. Num.*, 1895, p. 286, and A. J. Evans, *l.c.*, Pl. VIII. 8.)

PLATE XI (B).

1. *A*, 22 mm., wt. —, Copenhagen.
2. *A*, 21.5 mm., wt. 6.48 (rev.), ex Warren hoard (cf. No. 16), M. P. Vlasto.
3. *A*, 18 mm., wt. —, ex Warren hoard (cf. No. 16), Berlin.
4. *A*, 20 mm., wt. 6.51, M. P. Vlasto (cf. note No. 29 a).
5. *A*, 22.5 mm., wt. 6.20, ex Warren hoard (cf. No. 19), British Museum.
6. *A*, 20 mm., wt. —, ex Warren hoard (cf. No. 18), Berlin.
7. *A*, 20 mm., wt. 6.36 (rev.), ex Warren hoard (cf. No. 17), M. P. Vlasto.
8. *A*, 21 mm., wt. —, ex Warren hoard (No. 21), Berlin.
9. *A*, 19 mm., wt. 8.55, Cabinet des Médailles, Paris (cf. note No. 33).
10. *A*, 18.5 mm., wt. 8.60, British Museum (*B.M.C., Italy*, p. 162. 11), cf. note No. 39.
11. *A*, 12 mm., wt. 2.84, Paris (Duc de Luynes), cf. note No. 44.
12. *A*, 12 mm., wt. 2.84, M. P. Vlasto (found at Taranto, 1904).
13. *A*, 14 mm., wt. 2.83, Berlin (ex Löbbecke), cf. note No. 43.
14. *A*, 15 mm., wt. 4.276, British Museum (*B.M.C., Italy*, p. 162, No. 14), from the same dies as (a) Paris; (b) Berlin (ex Löbbecke); (c) M. P. Vlasto = Hirsch, Munich XXVI Sale, Pl. I. 15 = *Berlin Beschr.*, Pl. X. 157 = P. Dupré, 1867 Sale, no. 17; (d) Taranto Museo = Nervegna, Rome, 1907 sale, Pl. II. 247; (e) Lucerne XII Sale, Pl. 6. 233 (from the 1926 find).
15. *A*, 14.5 mm., wt. 4.29, British Museum (*B.M.C., Italy*, p. 162. 15), presumed unique.
16. *A*, 14.5 mm., wt. 4.28, M. P. Vlasto (found near Taranto, 1910). Many other examples, all from the same dies, are known.

17. *A*, 14.5 mm., wt. 4.276, M. P. Vlasto (from the 1926 find), from the same dies as (a) Milan; (b) Berlin, ex Imh.-Blumer Collection; (c) Copenhagen = A. Hess, Berlin duplicate sale, Frankfurt-a.-M., 1902, Pl. I. 201 = *Berlin Beschr.*, iii, p. 228. 19.
18. *Æ*, 18 mm., wt. 8.46, M. P. Vlasto = Paris 16 June 1906 Sale = R. Jameson ex A. J. Evans.

PLATE XII (C).

1. *A*, 17.5 mm., wt. 8.59, M. P. Vlasto = A. Hess, Nachf., Frankfurt-a.-M. 1902 Sale, Pl. I. 200 = Imhoof-Blumer Coll. = P. Dupré (1867) Sale, lot No. 10.
2. *A*, 17.5 mm., wt. 8.55, M. P. Vlasto (1926 find).
3. *A*, 19 mm., wt. 8.60, M. P. Vlasto (1926 find).
4. *A*, 18.5 mm., wt. 8.57, ?-(1926 find), *Commerce*, 1926.
5. *A*, 18 mm., wt. 8.60 (obv. of Type No. 4), M. P. Vlasto (1926 find); (rev. of Type No. 5) M. P. Vlasto (for the obverse of this stater (Type No. 5) cf. *J.I.A.N.*, Pl. IZ. 2).
6. *A*, 17.5 mm., wt. 8.58, M. P. Vlasto (1926 find).
7. *A*, 17.5 mm., wt. 8.59, M. P. Vlasto (1926 find).
8. *A*, 17 mm., wt. 8.58, Berlin, presumed unique.
9. *A*, 19.5 mm., wt. 8.56, British Museum, presumed unique.
10. *A*, 19.5 mm., wt. 8.55, Cabinet des Médailles, Paris, presumed unique.
11. *A*, 13.5 mm., wt. 2.16, M. P. Vlasto (found at Taranto, 1911), from the same dies as R. Jameson, cf. *R. J. Cat.*, Pl. XCVII, No. 1828 = Hirsch XXXI Munich Sale, Pl. I. 8 (ex M. P. Vlasto Coll.). The obverse from the same die as (a) S. W. Grose, *McClean Cat.*, Pl. 23. 13 = Paris, 1889, Sale, Cte. de Duchâtel, Pl. I. 5; (b) Berlin ex Löbbecke.
12. *A*, 12 mm., wt. 2.14, British Museum (*B.M.C., Italy*, p. 168. 23), presumed unique die-combination. The obverse from the same die as hereunder, No. 15.
13. *A*, 12.5 mm., wt. 2.16, M. P. Vlasto (1929), from the same dies as (a) L. Forrer, *Cat. of the Sir H. Weber Coll.*, Pl. 25. 554; (b) Vienna.
The obverse from the same die as (a) *B.M.C., Italy*, p. 168, No. 24; (b) Naples (Fiorelli, *Santangelo*, No. 2293); (c) Paris (Luynes, cf. *J. Babelon*, l. c., Pl. X. 248); (d) M. P. Vlasto = Paris 1919 Sale (Collignon), Pl. 19. 1 = Hubert = Nervegna Sale,

- Rome, 1907, Pl. II. 250. The reverse from the same die as (a) Paris (cf. *Rev. Numismatique*, 1905, Pl. II. 42); (b) Paris (Luynes, l.c., Pl. X. 249); (c) M. P. Vlasto = Sotheby, London, 1900, Late Collr. Sale, Pl. I. 22 = T. Thomas Sale, No. 42.
14. *A*, 12.5 mm., wt. 2.11, M. P. Vlasto (found near Taranto, 1919), from the same dies as the only other example known in the Taranto Museo Civico.
15. *A*, 12.5 mm., wt. 2.145, M. P. Vlasto (ex T. H. Ionides Coll.), from the same dies as the only other example known (with **NK** off field), formerly in the Nervegna Collection (cf. M. P. Vlasto, *J.I.A.N.*, 1901, Pl. IS. 11) and included in the Paris 19 Dec. 1907 Sale, Pl. I. 15 = Lucerne XV Sale (1930), Pl. 4. 104.
16. *A*, 12.5 mm., wt. 2.13, Berlin (*Beschr.*, iii, p. 229, no. 27) = Gen. Fox Coll., from the same dies as the only other known example, purchased by the British Museum at the Bunbury Sale (Sotheby 1896, lot No. 76) = P. Dupré (1867) Sale, lot No. 21 a, cf. *Num. Chron.*, 1897, Pl. III. 1.
17. *A*, 10 mm., wt. 1.06, M. P. Vlasto (1926 find), cf. note No. 65.
18. *A*, 8.5 mm., wt. 0.867, M. P. Vlasto; cf. note No. 67.

MISCELLANEA.

A FIND OF ROMAN COINS NEAR NEATH. GLAMORGANSHIRE.

IN April-May, 1919, during the erection of the Oil Refinery for the Anglo-Persian Oil Co. at Skewen, between Swansea and Neath, Glamorganshire, an old quarry was re-opened to obtain building stone. This had not been worked within living memory, but, at some period, had been cut in a series of steps between four feet and five feet wide and high. The steps were covered with an accumulation of loose stones and debris to a depth of about two feet. In clearing this accumulation, coins were discovered in a hollow covered by two flat stones. Although no decayed fabric was found, it is surmised from their position that they were originally in a bag or wrapping. I first heard of the find about twelve months after the discovery, when the place had been considerably altered by excavation, so I have been unable to examine the site in its original state. Consequently, I have to rely on the description given by the finder. The coins were found close to the intersection of the vertical and horizontal surfaces of the rock, and many had found their way through the loose stones on to the rock and corroded, in some cases fast, to the horizontal surface of the step. This probably happened when the covering decayed and allowed the coins to separate. The original number of coins can only be estimated, but it was probably between 150 and 200, the finder describing the find as "a whole shovelful". I think that the majority of the coins were broken after finding, as most of the fractures appear quite new. It is unfortunate that only a portion of the coins are suitable for examination, but from the number classified (about 60) we are able to form a fair idea of the bulk of them. I have been able to collect about 130, the majority in a very bad state and fractured. The location of the find is in close proximity to the line of the Roman road Via Julia Maritima between the Roman Stations of Nidum (Neath) and Leucarum (Lougher), but the exact road at this point is difficult to trace. I think it may safely be

assumed that the quarry was worked by the Romans during their occupation to obtain material for their roads and buildings.

A somewhat similar hoard was found in 1835 at Gwindy, about four miles nearer Swansea (also on the line of the Via Julia). This (Gwindy) find consisted of about 500 coins, and was discovered after a severe thunderstorm. The coins were contained in a vessel of coarse brown ware and belonged to Gallienus, Victorinus, Tetricus I, Claudius Gothicus, with one each of Salonina, Marius, Quintillus, and Aurelianus. In the same year (1835) seven coins of Carausius were found on the beach between the sites of the Gwindy and present finds.

From the presence of one coin of the earlier issues of Diocletian and the single coin of Allectus it is possible to fix fairly closely the date of the deposit of the hoard. It was, no doubt, buried some time about A.D. 296 during the troubles which followed the re-conquest of Britain by Constantius Chlorus after the defeat and death of Allectus.

It was only with difficulty that I was able to get at any useful information as to the discovery, and I have to acknowledge the great help I have received in the search from Mr. L. D. Thomas, of Neath, himself a keen local archaeologist.

The find may be roughly classified into the following groups:

Legitimate Empire:

Gallienus	.	.	.	.	.	7 coins
Claudius Gothicus	.	.	.	.	.	6 "
Tacitus	.	.	.	.	.	1 "
Diocletianus	.	.	.	.	.	1 "

Gallie Empire:

Postumus	.	.	.	.	.	4 "
Victorinus	.	.	.	.	.	10 "
Tetricus I	.	.	.	.	.	4 "
Tetricus II	.	.	.	.	.	6 "

British Empire:

Carausius	.	.	.	.	.	27 "
Allectus	.	.	.	.	.	1 "

The mints to which the coins may be attributed are as follows :

Colchester	.	.	.	.	.	16 coins
London	.	.	.	.	.	10 "
Rome	.	.	.	.	.	6 "
Milan	.	.	.	.	.	4 "
Arles	.	.	.	.	.	1 "
Vienne (?)	.	.	.	.	.	1 "
Lyons	.	.	.	.	.	1 "

The remainder are of doubtful origin.

The earliest issue is the billon coin of Postumus, which is evidently one of the early issues of that Emperor's reign, probably about A. D. 260.

Two coins of Gallienus from the mint of Rome, **DIANAE CONS AVG** and **LIBERO P CONS AVG**, are perhaps of 267-268.

Amongst the hoard are several coins of interest, some of which appear unnoted.

The principal coins may be thus described :

Coins of the Legitimate Empire.

GALLIENUS.

Four coins of Mint of Rome :

Obverse—**GALLIENVS AVG**

With reverses—

(i) **APOLLINI CONS AVG** $\frac{1}{N}$ Cohen 73.

(ii) **LIBERO P CONS AVG** $\frac{1}{B}$ Cohen 586.

(iii) **DIANAE CONS AVG** $\frac{1}{S}$ Cohen 161.

(iv) Illegible (probably Providentia).

One of Milan Mint :

Obv.—**GALLIENVS AVG** Rad. head r., base of neck triple-curved.

Rev.—**PIETAS AVG P** | Pietas standing l. before a lighted altar, her right hand raised. 20 mm.
This is a variety of Cohen 786, which is

described as "with both hands raised", which does not seem to be the case on this coin. The high relief and triple curved base of neck is typical of the Milan mint, although the mint-mark is not clear.

Two coins of doubtful mint:

(i) *Obv.*—**GALLIENVS AVG** Rad. and cuirassed bust r.

Rev.—**PAX AVG** Pax standing—details indistinct. 19 mm.

(ii) *Obv.*—**GALLIENVS AVG** Rad. head to left.

Rev.—**FORTVNA RED[VX]** Fortuna standing l., holding r. rudder, l. cornucopiae. Cohen 265.

CLAUDIUS GOTHICUS.

Six coins in very poor condition, one or two possibly Gallic imitations.

One probably of Mint of Rome:

Obv.—**IMP C CLAVDIVS AVG** Rad. and cuirassed bust r.

Rev.—**VICTORIA AVG** Victory standing l., holding r. wreath, l. palm.

TACITUS.

Obv.—**IMP C L TACITVS AVG** Rad. draped and cuirassed bust r.

Rev.—**SPES PVBLICA** $\frac{|}{CA}$ Spes standing l., holding r. flower, l. hand raising her robe. Cohen 137.

This coin is heavily silver-washed and is from Lugdunum mint.

DIOCLETIANUS.

Fragments of one coin of early issue, type and mint unascertainable.

Gallic Empire.

POSTUMUS.

- (i) *Obv.*—IMP POSTVMVS P F AVG Rad. draped cuirassed bust r.

Rev.—SALVS AVG $\frac{1}{P}$ Aesculapius standing, head l. Cohen 336. Milan mint.

- (ii) *Obv.*—IMP POSTVMVS P F AVG Rad. cuirassed bust r.

Rev.—CONCORD EQVIT $\frac{1}{S}$ Cohen 18. Milan.

- (iii) *Obv.*—IMP POSTVMVS AVG

Rev.—As (ii). Cohen 19. Milan.

- (iv) *Obv.*—IMP C POSTV[MVS P] F AVG Rad. draped cuirassed bust r.

Rev.—Illegible. Female standing l., holding r. patera, l. cornucopiae. This is the only coin in the find struck in billon. The alloy is very base, and the coin dates from an early period of the emperor's reign. It is probably of the Lugdunum (Lyons) mint, and is perhaps the earliest coin of the hoard.

VICTORINUS.

- (i) *Obv.*—IMP C VICTORINVS P F AVG

Rev.—SALVS AVG Probably Cohen 112.

- (ii) *Obv.*—As (i).

Rev.—PAX AVG $\frac{1}{V}$ 18 mm. Cohen 79.

- (iii) *Obv.*—As (i).

Rev.—INVICTVS 18 mm. Cohen 49.

(iv) *Obv.*—IMP VICTORINVS P F AVG

Rev.—As (i). 18 mm.

(v) *Obv.*—IMP C VIC[TORINVS] P F AVG

Rev.—Illegible. 18 mm. The portrait on this coin is somewhat like that of Tetricus I, but the letters VIC in the obverse inscription are clear.

The remaining five coins of this reign are in very poor state.

TETRICUS I.

Four coins in very poor state, one probably PAX AVG and one ORIENS AVG.

TETRICUS II.

(i) PIETAS AVGVSTOR Cohen 59.

(ii) and (iii) SPES PVBLICA

(iv) PAX AVG

Two illegible.

British Empire.

CARAVSIUS.

(i) *Obv.*—IMP C CARAVSIVS P F AVG Rad.
draped and cuirassed bust r.

Rev.—LAETIT AVG $\frac{S | P}{C}$ This appears to
be a mint-mark variety of Webb 302.

(ii) *Obv.*—IMP C CARAVSIVS P F I AVG
Rad. draped and cuirassed bust r.

Rev.—P[ROVI]D AVGS | P Providentia standing l., holding r. globe, l. transverse sceptre. 24 mm. (broken). The occurrence of the "I" (invictus) in obverse inscription appears un-noted and distinguishes the coin from Webb 557.

(iii) *Obv.*—IMP C CARAVSIVS P AVG Rad.
cuirassed bust r.

Rev.—GENIVS E[XERCI]T $\frac{S | C}{C}$ Genius

standing l., holding r. patera, l. cornucopia. 24 mm. A very scarce type. Webb 294.

(iv) *Obv.*—IM[P CARAVS]IVS P F I AVG Rad.
cuirassed bust r.

Rev.—PAX AVGGG S | P Exergue missing.
Webb 393. A scarce type with "I" in obverse inscription.

(v) *Obv.*—IMP C CARAVSIV[S P F] AVG Rad.
draped cuirassed bust r.

Rev.—PAX [AV]G $\frac{S | [P]}{C}$ Vertical sceptre;
silver-washed.

(vi) *Obv.*—IMP C CARAVSIVS P F AVG Rad.
cuirassed and (probably) draped bust r.

Rev.—PAX AVG $\frac{B | E}{MLXXI}$ Pax with vertical
sceptre.

(vii) *Obv.*—As (vi).

Rev.—As (vi) but transverse sceptre and mint-
mark $\frac{S | P}{MLXXI}$

(viii) *Obv.*—IMP C CARAV[SIVS P F AVG] Rad.
draped and cuirassed bust r.

Rev.—Probably PAX AVGGG $\frac{|}{MLXXI}$

(ix) *Rev.*—LEG IIII FLA[VIA] Centaur walking l.

The Centaur was the badge of Legio II Parthica, not that of IIII Flavia which bore a lion. The coin is probably of Colchester mint, whose moneyer seems to have used the Centaur die indiscriminately for all his legionary coins except one.

(x) *Obv.*—IMP C DIOCLETIANVS AVG Rad.
and cuirassed bust r.

Rev.—PAX AVGG[G] $\frac{S | P}{C}$ Exergue missing.
Pax standing l., holding r. olive-branch,
l. vertical sceptre. 24 mm. Webb 1242.
Silver-washed.

This coin was struck by Carausius to commemorate his acknowledgement by Diocletian and Maximian. The recorded mint-marks are $\frac{S | P}{MLXXI}$ and $\frac{S | P}{C}$, and, in the absence of the exergue, the coin may be of either mint. The clear remains of the silver wash are of interest, as until the Linchmere hoard it was unusual to find any trace of the wash on coins of the British mints.

(xi) *Obv.*—IMP C CARAVSIVS P F AVG Rad.
draped and cuirassed bust r.

Rev.—PAX AVGGG $\frac{1}{C}$ Pax holding r.
olive-branch, l. vertical sceptre. 25 mm.
Webb 392.

This coin is one of the series struck by Carausius to commemorate his recognition by the Roman Empire.

ALLECTUS.

Obv.—IMP C ALLECTVS P F I AVG Rad.
draped and cuirassed bust r.

Rev.—LAETIT AVG $\frac{S | P}{C}$ Laetitia standing l.,
holding r. wreath, l. short javelin. 22 mm.

The cuirass being visible forms a slight variety from Webb 115.

This neat and well-struck coin is an example of the efficiency to which the British mints had steadily risen during the reigns of Carausius and Allectus. The portrait shows at least an equal skill to that of the Continental moneyers.

The remainder of the coins are in such poor state as not to present any special features.

The finder, an employee of the Anglo-Persian Oil Co., has consented to the coins being deposited at the Welsh National Museum at Cardiff, an example which could well be copied by others who are fortunate enough to discover other antiquities of national interest.

GLEN A. TAYLOR.

REVIEW.

Manuel de Numismatique Française: vol. iii, by Adrien Blanchet. Paris: Picard, 1930. Pp. 640: 8 Plates.

This, the third, volume of the joint work of MM. Dieudonné and Blanchet on the numismatics of France deals with medals, jetons, and mereaux. The two last classes, practically unknown in this country, fill a large space in the metallic history of France, and M. Blanchet's task of covering his subject in one handy volume has been a heavy one. The result is a marvel of condensation, and the maximum amount of information is given in a minimum of pages. Here we can do little more than give an idea of what the book contains. The first third is devoted to medals. It opens with general chapters on the history of the medal in France, and goes in some detail into early references to medals—some known, others no longer in existence. By the sixteenth century the evolution of the medal is complete, and with the establishment of the mint for medals in 1585 the records become fuller, and M. Blanchet's difficulty is to select. Much interesting information has been obtained from the records of the French Academy, which was early entrusted with the duty of preparing the legends for medals. Before dealing with the medals in detail, M. Blanchet deals with a number of remarkable medals, suppressed pieces and medals of special fabric. He then gives a list of all known French medals, arranged under official, academical, personal, medals relating to towns and buildings, orders and decorations, &c.

The second third of the book deals with jetons and their uses, their origin and manufacture. This vast series, particularly associated with France, is divided into numerous classes: royal jetons, jetons of government offices, of corporations, various public and private bodies, of towns and provinces, and those of private individuals. M. Blanchet describes briefly thousands of jetons and gives valuable lists of legends. The last section of the book deals with the ecclesiastical mereau, which, unlike the jeton, was actually used occasionally as small change; mereaux were originally distributed by churches to the poor and entitled the holder to a certain quantity of food. Later the name was used for tickets issued by various bodies for different purposes. M. Blanchet deals with these pieces as fully as he has treated their nobler brethren. A concluding chapter deals with the curious *monnaies des évêques des innocents*. The book has a very full index and is altogether one of the most useful and labour-saving works that has appeared for many years.

J.A.

VII.

A FIND OF COINS OF CARAUSIUS AND ALLECTUS FROM COLCHESTER.

[SEE PLATE XIII.]

THE hoard of coins herein described was brought to me in July, 1927, with the statement that they had been found whilst rebuilding an old wall a few miles from Colchester.

It was decided to carry a drain underneath the wall and, whilst excavating a trench for this purpose, the workman struck and broke a pot from which the coins were scattered. Unfortunately the fragments of the pot were thrown away, so that I am not able to describe it. The find was purchased by a local man with some knowledge of coins, who cleaned a portion with spirits of salts, afterwards boiling them in soda, and then treating them with olive oil. The result of this drastic treatment was not so bad as one would have expected, though it destroyed the sharpness of the lettering and the outlines of the designs in those cases where the coins were heavily corroded. Luckily he had submitted only about a half of the find to this process, and I afterwards obtained possession of the uncleaned portion.

The coins, as found, were covered with a rough green patina, with a good deal of soil adhering to them, but many were sufficiently clean to show the original silver washing. After I had treated this

hitherto uncleaned portion of the hoard, many of the pieces showed traces of the white metal plating: there is, in fact, no doubt that all were issued from the mint silvered.

The hoard as a whole consisted of very neatly executed pieces with busts in high relief, with well-formed lettering, well centred on carefully rounded blanks. This is especially noticeable with the coins of Allectus, many of which are beautiful examples of portraiture with artistically decorated drapery and cuirass; those of Carausius are large wide-spread pieces with only one or two of the small and barbarous early issues.

Very few of the coins of Carausius bear evidence of circulation, whilst those of Allectus are as sharp as when struck, and must have been buried within a short time of their issue: they form, perhaps, the finest series of coins of this emperor ever discovered.

The hoard consisted of 298 coins, distributed over reigns as follows:

Gallienus	3
Salonina	1
Victorinus	3
Tetricus I	10
Tetricus II	4
Claudius II	5
Tacitus	1
Carausius	102
Allectus	167
Maximian	2
(Struck by Carausius)	

298

Carausius had 51 coins with mint-mark L. (London), 24 with mint-mark C. (Colchester?); of the remaining

27, 21 had mark of *officina*, but not of mint, 4 had neither.

Allectus had 114 coins with mint-mark L. (London), 53 with mint-mark C. (Colchester?).

Maximian had one coin of each mint.

Carausius had the following mint-marks:

<i>L.</i>		<i>C.</i>		<i>No mint-mark.</i>	
$\frac{L}{ML}$	1	$\frac{1}{C}$	3	$\frac{S}{C}$	10
$\frac{F}{ML}$	9	$\frac{S}{C}$	2		
$\frac{B}{MLXXI}$	20	$\frac{S}{C}$	18	$\frac{S}{P}$	10
$\frac{S}{MLXXI}$	21	$\frac{?}{C}$	1	$S | ?$	1

Allectus had the following mint-marks:

<i>L.</i>		<i>C.</i>	
$\frac{S}{ML}$	73	$\frac{S}{C}$	49
$\frac{S}{MSL}$	22		
$\frac{S}{ML}$	18	$\frac{S}{CL}$	2
$\frac{1}{QL}$	1	$\frac{1}{QC}$	2

The remaining coins contained in the hoard were as follows:

Gallienus	3.	C. 388, 667, 1225.
Salonina	1.	C. 92.
Victorinus	3.	C. 79, 118, 131.
Tetricus I	10.	C. 17, 37, 54 (2), 71 (2), 101 (2), 170 (?), 185.
Tetricus II	4.	C. 34, 97 (3).
Claudius II.	5.	C. 23, 98, 124, 197, 314.
Tacitus	1.	C. 144.

A full description of the coins of Carausius, Allectus and Maximian follows. The abbreviations used are Webb's, as follows. (pp. 177-95).

A. H. F. BALDWIN.

ABBREVIATIONS.

1. Obverse legends, referred to by numbers.

<i>No.</i>	<i>Legend.</i>
1	IMP· CARAVSIUS AVG·
2	IMP· CARAVSIUS P· AV·
3	IMP· CARAVSIUS P· AVG·
4	IMP· CARAVSIUS P· F· AV·
5	IMP· CARAVSIUS P· F· AVG·
6	IMP· C· CARAVSIUS AVG·
7	IMP· C· CARAVSIUS IVG·
8	IMP· C· CARAVSIUS P· AVG·
9	IMP· C· CARAVSIUS P· F· AVG·

2. Types of bust, referred to by letters.

<i>Letter.</i>	<i>Bust.</i>
A	Radiate, draped, r.
B	Radiate, draped, cuirassed, r.
C	Radiate, cuirassed, r.
D	Laureate, draped, r.
E	Laureate, draped, cuirassed, r.
F	Laureate, cuirassed, r.

LIST OF COINS IN THE HOARD.

No. in Webb, Num. Chron., 1907.	Obverse legend and type.	Reverse legend and type.	Mint-mark.	No. of specimens in hoard.
CARACIUS.				
<i>London Mint.</i>				
24 var.	9 A	COMES AVGGG Minerva standing to left, holding olive-branch in right hand, in left a vertical spear pointing upwards, and leaning against a buckler.	$\frac{S}{P}$ MLXXI	1
24 var.	9 C	As last, but Minerva has vertical spear in right hand, the left resting on buckler.	$\frac{S}{P}$ MLXXI	1
128	5 B	PAX AVG Peace standing to left, holding olive-branch in right hand and vertical sceptre in left.	$\frac{B}{E}$ MLXXI	1
128	5 B	As last.	$\frac{F}{O}$ ML	9
128	5 B	"	$\frac{L}{L}$ ML	1

[Pl. XIII. 1.]

139	9 B	"	$\frac{S | P}{MLXXI}$	11	[Pl. XIII. 2.]
139	9 B	"	$\frac{B | E}{MLXXI}$	12	
144	9 B	As above, but with transverse sceptre.	$\frac{B | E}{MLXXI}$	1	
149	9 B	"	$\frac{B | E}{MLXXI}$	4	
149	9 C	"	$\frac{S | P}{MLXXI}$	3	
167	9 B	PAX AVCGG Peace standing to left, holding olive-branch and vertical sceptre.	$\frac{S | P}{MLXXI}$	1	
170	9 B	As last, but transverse sceptre.	$\frac{S | P}{MLXXI}$	4	
176	5 B	PROVIDENT AVG Providence standing to left, holding a globe in right hand and a sceptre transversely in left.	$\frac{B | E}{MLXXI}$	2	

No. in Webb, Num. Chron., 1907.	Obverse legend and type.	Reverse legend and type.	Mint-mark.	No. of specimens in hoard.
<i>Colchester Mint.</i>				
244	5 B	COMES AVG Winged Victory standing to left, holding a wreath in right hand and a palm in left.	$\frac{-|-}{C}$	1
296 var.	8 B	IOVI CONSER Jupiter naked standing to left, fulmen in right hand and a caduceus in left.	$\frac{S|P}{C}$	1
311	8 B	LAETITIA AVG Laetitia standing to left, holding a wreath in right hand and a wand in left.	$\frac{S|C}{C}$	1
341 var.	8 B Bust to left.	MONETA AVG Moneta standing to left, holding scales in right hand and cornucopiae in left.	$\frac{S|C}{C}$	1
354 var.	IMP C CARAVSIVS P·F·I·AVG· Ra- diated draped and cuirassed bust to right.	PAX AVG Peace standing to left, holding a branch in right hand and vertical sceptre in left.	$\frac{S|P}{C}$	1
356	3 A	As above.	$\frac{-|-}{C}$	1

[Pl. XIII. 3.]

358	5 B	"	$\frac{—}{—} \frac{—}{C}$	1
360	6 B	"	$\frac{S | P}{C}$	1
364	8 B	"	$\frac{S | P}{C}$	1
367	9 B	"	$\frac{S | P}{C}$	2
375	9 B	As above, but with transverse sceptre.	$\frac{S | P}{C}$	2
391	8 B	PAX AVGGG Peace standing to left, holding a branch and vertical sceptre.	$\frac{S | P}{C}$	1
392	9 B	As above.	$\frac{S | P}{C}$	1
394	Type B. Legend IMP C CARAVSIVS P F IN AVG	"	$\frac{S | P}{C}$	1 1 1 Large heavy bust. 1 Smaller bust and different portrait; both are artistic pieces and well centred.

<i>No. in Webb, Num. Chron., 1907.</i>	<i>Obverse legend and type.</i>	<i>Reverse legend and type.</i>	<i>Mint-mark.</i>	<i>No. of specimens in hoard.</i>
394 var.	As above, but INV for IN	As above.	$\frac{S | P}{C}$	1
402	9 B	PROVID AVG Providence standing to left, holding a staff in left hand and cornucopiae in right, a globe between staff and feet.	$\frac{?}{C}$	1 Somewhat double-struck.
411 var.	6 B	PROVID AVG Providence standing to left, holding globe in right hand and cornucopiae in left.	$\frac{S | P}{C}$	1
416 var.	6 B	As above, but Providence holds transverse sceptre in left.	$\frac{S | P}{C}$	2
428 var.	Type B. Legend IMP C CARAVSIVS P F I AVG	PROVID AVGGG As last.	$\frac{S | P}{C}$	1
433 var.	6 B	PROVIDE AVG Providence standing to left, holding in right hand a staff placed between a globe and her feet, on left a cornucopiae.	$\frac{S P}{C}$	1

No mint letter.

501 A	8 B	HERC(VL) COFE Hercules naked standing to left, holding a branch in right hand, club and lion's skin on left arm.	S | C	1	The figure of Hercules is double-struck so that it appears as if he is accompanied by a second figure carrying the branch. The letters shown are perfectly clear. [Pl. XIII. 4.]
503 A	9 B	IOVI CON ERVT AVG Jupiter naked standing to left, holding a thunderbolt in right hand, long spear pointing upward in left.	S | P	1	
503 B	9 A	IOVI VICTORI Jupiter naked standing to left, with head turned to right, holding a thunderbolt in right hand and grasping a spear with left.	S | P	1	
509	6 A	LAETITIA AVG Laetitia standing to left, holding a wreath in right hand and a wand in left.	S | C	1	The S C is placed opposite the shoulders.

<i>No. in Webb, Num. Chron., 1907.</i>	<i>Obverse legend and type.</i>	<i>Reverse legend and type.</i>	<i>Mint-mark.</i>	<i>No. of specimens in hoard.</i>
529	8 B	PAX AVG Peace standing to left, holding olive-branch and vertical sceptre.	S | P	1
529	8 C	As above.	S | C	1
531	9 B	"	S | C	1
531	9 B	"	S | P	5 Four with elongated neck.
533	IMP. C. CARAVSI VS P. F. I. AVG. Bust draped.	"	S | P	1
538	8 B	As above, but transverse sceptre.	S | C	2
540	9 B	As last.	S | C	2
550	8 B	PROVID AVG Providence standing to left, holding a staff placed between her foot and a globe, in left hand a cornucopise.	S | ?	1

555	9 A or B	PROVID AVG Providence standing to left, holding globe and cornucopiae.	S | P	1	[Pl. XIII. 5.]
563 var.	9 B	PROVIDE AVG As 550, but the staff is outside the globe.	S | C	1	
579 var.	9 B	VIRTVS AVG Mars standing to right partly draped, spear in right hand, the left resting on a buckler.	S | C	1	
<i>No letters nor mint-mark.</i>					
920	5 A	LAETITIA AVG Laetitia standing to left, holding wreath in right hand and a wand in left.	—	1	
921	5 B	As last.	—	1	
986	5 B	PAX AVG Peace standing left, holding olive-branch in right hand and vertical spear in left.	—	1 (Very small.)	
996	5 B	As last, but sceptre transverse.	—	1 (Double-struck.)	

No. in Webb, Num. Chron., 1907.	Obverse legend and type.	Reverse legend and type.	Mint-mark.	No. of specimens in hoard.
COINS ISSUED BY CARAUSIUS WITH NAME OF MAXIMIAN HERCULES.				
—	IMP C MA VAL MAXIMIANVS P. F. AVG. Radiate cuirassed bust to right.	PAX AVG Peace standing to left, holding olive-branch and vertical sceptre.	S | P C	1 Unpublished with AVG and pro- bably unique. [Pl. XIII. 14.]
—	IMP C MAXIMIAN VS AVG Bust as above.	PAX AVGGG Peace standing as above with <i>transverse</i> sceptre.	S | P MLXXI	1 Cohen 462.
21 A	2 C	ALLECTUS. <i>London Mint.</i> FELICITAS SEC Felicitas standing to left, holding caduceus in right hand and cornucopiae in left.	S | A ML	1 This is a new re- verse legend for Allectus. The only other in- stance of the reading SEC is found under Probus, Cohen 225. [Pl. XIII. 6.]

23	2 C	HILARITAS AVG Hilaritas standing to left, holding a long palm and a cornucopiae.	$\frac{S}{ML} \mid \frac{A}{ML}$ $\frac{S}{ML} \mid \frac{P}{ML}$	1 1
23 A	2 C	IOVI CONSERVATORI Jupiter naked standing to left, mantle over left shoulder, holding a thunderbolt and sceptre.	$\frac{S}{ML} \mid \frac{A}{ML}$	2
26	2 A	LAETITIA AVG Laetitia standing to left, holding a wreath in right hand and wand in left.	$\frac{S}{ML} \mid \frac{A}{ML}$	Staff 1. Javelin 3.
27	2 B	As last, Laetitia holding wand.	$\frac{S}{MSL} \mid \frac{A}{MSL}$	1
28	2 C	The same, Laetitia holding wreath and wand.	$\frac{S}{ML} \mid \frac{A}{ML}$	9
28	2 B	As last.	$\frac{S}{ML} \mid \frac{P}{ML}$	1 [Pl. XIII. 7.]
28	2 C	"	$\frac{S}{MSL} \mid \frac{A}{MSL}$	8
28 A	IMP. C. ALLECTVS P. F. I. AVG. C	"	$\frac{S}{MSL} \mid \frac{A}{MSL}$	1

<i>No. in Webb, Num. Chron., 1907.</i>	<i>Obverse legend and type.</i>	<i>Reverse legend and type.</i>	<i>Mint-mark.</i>	<i>No. of specimens in hoard.</i>
38	2 B	PAX AVG Peace standing to left, holding olive-branch in right hand and vertical sceptre in left.	S | A ML	6
39	2 C	As last.	S | A MSL	1
39	2 C	"	S | A ML	7
39	2 C	"	S | P ML	4
41 var.	VIRTVS ALLECTI AVG Helmed bust of Allectus to left, ra- diate and cuirassed, holding spear over right shoulder, an ornamented buckle on the left shoulder.	PAX AVG Peace standing to left, with olive-branch in right hand and vertical sceptre in left.	S | A ML	1 An unpublished piece (cp. Pro- bus, Cohen 617, and Carausius, Cohen 257, and Webb, Pl. IV. 2. [Pl. XIII. 8.]
43	2 B	As last, but the sceptre transverse.	S | A ML	12

43	2 B	As last.	S | P ML	3
44	2 C	"	S | A ML	22
44	2 C	"	S | A MSL	4
44	2 C	"	S | P ML	6
44 var.	IMP C ALLECTVS P F I AVG A	"	S | A ML	1 (Same obv. die as 55 var. below.)
47	2 C	PIETAS AVG Piety standing to left before an altar, holding a patera and a box of perfumes.	S | A ML	1
48 var.	2 C	PROVID AVG Providence stand- ing to left, holding a globe and a cornucopiae.	S | A ML	1 (Small flan.)
55 var.	IMP C ALLECTVS P F I AVG A	PROVIDENTIA AVG Providence standing to left, holding a staff in right hand and a cornucopiae in left, a globe between staff and feet.	S | A ML	1 (Same obv. die as 44 var. above.)

[Pl. XIII. 9.]

<i>No. in Webb, Num. Chron., 1907.</i>	<i>Obverse legend and type.</i>	<i>Reverse legend and type.</i>	<i>Mint-mark.</i>	<i>No. of specimens in hoard.</i>
56	2 C	As above, but Providence holds transverse sceptre and globe.	S | A MSL	2
57	2 B	As last. Providence holds globe and cornucopiae.	S | A ML	2
58 var.	2 C	As last.	S | A MSL	2
58 var.	2 C	"	S | A ML	2
61	2 C	As last. Providence with staff in right hand pointing to a globe at her feet and cornucopiae in left.	S | A MSL	2
68 var.	2 C	SALVS AVG Health standing to right, feeding a serpent which she holds in her arms.	S | A MSL	1
71	2 B	SPES AVG Hope walking to left, holding a flower in her right hand and raising her dress with the left.	S | P ML	1

83	2 C	VIRTVS AVG Mars standing to right, holding a spear in right hand, his left resting on a buckler.	S | A ML	2
88	2 B	VIRTVS AVG A galley with six oars.	QL	1
<i>Colchester Mint.</i>				
109	2 C	FIDES MILITVM Faith standing to left between two military ensigns.	S | P C	5 [Pl. XIII. 10.]
119	2 B	LAETITIA AVG Laetitia standing facing with head turned to right, holding a wreath in right hand and resting the left on a wand.	S | P C	1 (Massive bust with thick neck.)
119	2 C	As last, but Laetitia is facing left.	S | P C	7 (Some of these have a small head with long thin neck.)
126	2 C	LAETITIA AVG Galley to right with mast and cordage and four rowers.	QC	1
133	2 C	MONETA AVG Moneta standing to left, holding scales in right hand and cornucopiae in left.	S | P C	1

<i>No. in Webb, Num. Chron., 1907.</i>	<i>Obverse legend and type.</i>	<i>Reverse legend and type.</i>	<i>Mint-mark.</i>	<i>No. of specimens in hoard.</i>
134 A	2 B	ORIENS AVG The sun-god, radiate, standing slightly to right with head turned to left, mantle over shoulders and falling over left arm. The right hand is raised, the left holds a globe; at his feet on each side is a captive seated.	$\frac{S \mid P}{C}$	1
136	1 C	PAX AVG Peace standing left, right hand holding olive-branch, left a vertical sceptre.	$\frac{S \mid P}{C}$	1
137	2 B	As last,	$\frac{S \mid P}{C}$	1
138	2 C	"	$\frac{S \mid P}{C}$	3
140	IMP C ALLECTVS P F IN AVG B	"	$\frac{S \mid P}{C}$	1
143	2 B	As last, except that the sceptre is transverse.	$\frac{S \mid P}{C}$	4

[Pl. XIII. II.]

		As last.		$\frac{S|P}{C}$	1 (Small bust.)
144	2 C				
151	IMP C ALLECTVS PI FE AVG B	PROVID AVG Providence standing to left, holding a globe in her right hand and a transverse sceptre in her left.		$\frac{S|P}{C}$	1
159	1 A (or B?)	PROVIDENTIA AVG As above.		$\frac{S|P}{C}$	1
160	2 C	As last.		$\frac{S|P}{C}$	3
160	2 C	"		$\frac{S|P}{CL}$	1
164	2 B	As above, but Providence holds cornucopae in left hand.		$\frac{S|P}{C}$	1
164	2 C	As last.		$\frac{S|P}{C}$	8
166 A var.	3 C	PROVIDENTIA AVG Providence standing to left, with staff in right hand resting on ground between globe and foot, cornucopae in left.		$\frac{S|P}{C}$	1

No. in Webb, Num. Chron., 1907.	Obverse legend and type.	Reverse legend and type.	Mint-mark.	No. of specimens in hoard.
166 B var.	3 C	As above, but without globe.	$\frac{S | P}{C}$	1
167	1 C	As 166 a.	$\frac{S | P}{C}$	1
168	2 C	As last.	$\frac{S | P}{CL}$	1
168	2 C	"	$\frac{S | P}{C}$	1
171	2 B	SALVS AVG Health standing to left, feeding a serpent raising itself from an altar round which it is entwined. In left hand vertical sceptre.	$\frac{S | P}{C}$	1
178	2 C	TEMPORVM FELICI Felicitas standing to left, holding caduceus and cornucopiae.	$\frac{S | P}{C}$	1
183	2 B	VIRTVS AVG Soldier, helmeted, standing to right, holding long spear in right hand and resting the left on a buckler.	$\frac{S | P}{C}$	1

[Pl. XIII. 12.]

[Pl. XIII. 13.]

183 var.	2 C	VIRTVS AVG Soldier standing to right, holding a long spear transversely in right hand and a globe in the left.	$\frac{S | P}{C}$	1
186	1 C	VIRTVS AVG Galley to left with mast and cordage, four rowers, five oars.	QC	1
186	2 C	As last, five rowers and five oars.	QC	1

VIII

A NOTE ON THE COLCHESTER FIND OF CARAUSIUS.

HERE we have a deposit made not long before the end of the reign of Allectus, say in A.D. 295, at the earliest; perhaps even during troubles which may have attended the recovery of Britain by Rome in 296. It contains, as the Linchmere Hoard did, so great a number of coins in the finest condition as to suggest that it had but recently been drawn from the mint or other agency that distributed currency in Roman days.

It emphasizes the fact that in their later years the British moneyers were turning out very fine work, and confirms the conclusion already drawn from Linchmere that, at least as soon as the mints of Carausius were well established, they followed the Roman practice of washing the antoniniani with white metal.

The number of Continental and poor British pieces is very small; they may have been in the owner's possession before he drew out the bulk of the money, or perhaps it was the custom of the agency, while paying out for the most part in recent and current issues, also to get rid of a few of its inferior coins in stock; for we find some such admixture in the great majority of hoards. It is noteworthy that there are no quite contemporary Continental coins in this deposit.

I think that the coins marked $\frac{L}{ML}$ and $\frac{F}{M} \frac{O}{M}$ were issued in 288 and 289, the former being the earlier, and were followed during the short peace with Rome

by the marks comprising **MLXXI**, including, of course, the London coin issued in the name of Maximian. It may be noted that the marks which appear to have been used at London later in the reign (as at least one of them was continued by Allectus) are not represented.

The mark $\frac{1}{C}$ of Camulodunum was an early one, but seems to have been sometimes used later. It appears three times in this hoard. The batch of marks including the letter **M** and the mark of value which probably came next in chronological order are absent, but the later ones $\frac{S | C}{C}$ and $\frac{S | P}{C}$ appear, the latter in considerable numbers; so between the two mints, the whole of the reign of Carausius, except its earliest period, is covered. The fabric of the coins marked $\frac{S | P}{C}$ and $\frac{S | C}{C}$ suggests, as these coins generally do, that the marks were used at both mints, the former more often at London and the latter at Camulodunum. The coins also support the view that the obverse inscriptions of Carausius tend to increase in length as the reign progresses. The coin of Maximian marked $\frac{S |}{C}$ was probably issued by Carausius, but it is one of a small and very scarce series which uses the termination **AVG** on the reverse, and may possibly have been issued immediately after the fall of Allectus. It is against this possibility that, so far as I know, no like coin of Constantius Chlorus has been discovered.

The hoard, having been found near Colchester, might have afforded definite evidence in favour of the attribution of the **C** marks to that city, but the

London coins are still in the majority, though the proportion of "C" coins is larger than usual. The evidence is therefore inconclusive, but at least does not assist those who wish to remove the mint to another city. We know that the total issue of London was much in excess of that of its sister mint.

Nor does the hoard assist in the chronological arrangement of the coins of the short reign of Allectus, for it comprises all his common mint-marks. Had one or more of them been absent we might have seen reason to attribute the coins so marked to the end of the reign, and remove the deposit to an earlier date than that suggested above.

It is true that very few coins marked Q are included, but that may well be because they are of a different denomination from the rest of the find, and the owner may not have wanted them. An alternative explanation would place them at the very end of the reign, and assume a somewhat earlier date for the deposit, but this view can hardly be accepted, seeing that these small pieces exist in such large numbers that we cannot suppose them to have been all produced in a very short time.

It is very satisfactory to find that the evidence of the hoard is consistent with the conclusions already drawn from other sources of information, and to learn once again from the considerable number of new varieties of legend, type and treatment which it contains that our knowledge of the extraordinary versatility of the moneyers of the two emperors has by no means reached finality.

Mr. Baldwin deserves our gratitude for securing the hoard intact and for the remarkable skill which he has displayed in the cleaning of its contents.

P. H. WEBB.

IX.

SOME NOTABLE COINS OF THE MUGHAL EMPERORS OF INDIA.

PART III.

(Continued from *Num. Chron.*, 1926, p. 416.)

[SEE PLATES XIV, XV.]

AT the time of writing the Second Part of this paper I had only recently seen the coins in the Christ Church Library, Oxford. Since then I have had the pleasure of inspecting the Indian coins in the Cabinet of the Kunsthistorisches Museum, Vienna. There are some outstanding pieces in the Herzogliches Münzkabinett, Gotha. I wish to express my obligations to the Directors of these Cabinets, and to the Governing Body of Christ Church, Oxford, for kind permission to publish.

The Indian coins now in the Kunsthistorisches Museum, Vienna had been in the Royal Cabinet since the eighteenth century, if not longer. The Collection at Christ Church, Oxford, is at least a century old, and the two hundred rupee piece of Aurangzeb at Gotha was already there in the year 1712.¹ In each case the collection is small but choice. It is interesting to note what pieces were sought after by the agents who brought them to Europe in those comparatively early days. Like Tavernier, they paid special attention to

¹ Aurangzeb died in A.D. 1707.

the zodiacal coins of Jahāngīr. There is a complete genuine set in gold at Oxford and Vienna; as also at Paris, Berlin, Leningrad, and in the Hunterian Collection at Glasgow.² The older coins at Berlin have been supplemented by the splendid Guthrie Collection which was bought by the German Government in 1876; it contains a wonderful lot of zodiacal coins.³ Other notable pieces were selected with knowledge and judgement; several still remain unique.

I wish to correct an error in the Second Part of this paper⁴—Āsaf Khān was the brother, not father of Nūr Jahān. The first line of the couplet on p. 402 should read

سکه زد بر زر با امن و امان

LIST OF ABBREVIATIONS.

- B.M.Cat. = Catalogue of Indian Coins in the British Museum, The Moghul Emperors, 1892.
 P.M.Cat. = Catalogue of the Coins in the Panjab Museum, Lahore, Vol. II; Oxford, 1914.
 I.M.Cat. = Catalogue of the Coins in the Indian Museum, Calcutta, Vol. III; Oxford, 1908.
 L.M.Cat. = Catalogue of the Coins in the Lucknow Museum, Mughal Emperors, Oxford, 1920.
 J.A.S.B. = Journal of the Asiatic Society of Bengal.
 Mem. = Second Memoir of the Numismatic Society of India. Historical Studies in Mughal Numismatics. By S. H. Hodivala. Calcutta, 1923.
 Tūzūk = Tūzūk-i Jahāngīrī (Memoirs of Jahāngīr). London. Royal Asiatic Society, 1909.

² Also in the British Museum and at New York.

³ The Guthrie Collection is often mentioned in Edward Thomas's *Chronicles of the Pathan Kings of Delhi*. I hope to describe zodiacal coins in the Second Part of my paper "The Portrait Medals and Zodiacal Coins of the Emperor Jahāngīr".

⁴ *Num. Chron.*, 1926, p. 361.

A.H. = Hijra Year.

R.Y. = Regnal Year.

W. = weight in grains.

S. = size in inches.

Ilāhī = Divine, especially as applied to the years and months of Akbar's Divine Era. For months of the Ilāhī Year, see *Num. Chron.*, 1929, p. 2

AKBAR.

1.	<i>Obv.</i>	<i>Rev.</i>
In triple square, central one of dots, on flowered field	Contained as obverse, on flowered field	
	اَكْبَرُ الله	۹۸۱ مَعِين يَا
	<i>Allāhu Akbar.</i>	<i>Yā Mu'īnu.</i>

A. Square. .65 in. Wt. 336.5 gr. [Pl. XIV. 2.] Vienna.

This outstanding piece, unpublished and unique, is in the National Collection at Vienna. It is a double mohur of Akbar, very thick, mintless, year 981 A.H. I have discussed the significance of the *takbīr*, *Allāhu Akbar*, "God is most Great", when used as Akbar's symbolical motto and of the invocation *Yā Mu'īnu*, "O Defender", in my paper *The Portrait Medals of the Emperor Jahāngīr—Num. Chron.*, 1929—see also *Mem.*, *The Coin Legend Allāhu Akbar*.

Abū'l-Faẓl's inventory of Akbar's coins, in the tenth chapter of the first book of the *Ā'in-i-Akbarī*, includes the following gold issues.⁵

The *'adlqutka* has a value of nine rupees; on one side *Allāhu Akbar*, and on the other *Yā Mu'īnu*.

⁵ Quoted by Mr. Hodivala from Blochmann's Translation—*Mem.*, pp. 42, 65. See also *B.M. Cat.*, p. lxxii.

The *mu'inī* is both square and round; it bears the stamp *Yā Mu'inu*.

The *mihrābī* is equal in weight to the *'adlguṭka*, but has a different stamp.

All three entries relate to gold coins of the usual mohur size; the first two bear the legend *Yā Mu'inu*. There is an elaborate description of a number of heavy pieces in gold, rising in weight from the equivalent of two to that of more than one hundred mohurs. The two-mohur pieces are the *chūgul* of a square form, and a round piece having on one side *Allāhu Akbar*, and on the other *Yā Mu'inu*. The legends of the *chūgul* are not mentioned.

The only two surviving *mu'inī* pieces known to me are the square double mohur above described, and the *mihrābī* piece published by Mr. J. G. Delmerick in *J.A.S.B.*, Part I, 1876 (Pl. V, 8). I illustrate this most interesting coin which as far as I know is still unique. I believe that it was purchased by, and may still belong to the Nawab of Loharu, a state west of Delhi.



Obv.

On floral field within triple border

الله أكبر

Rev.

As on obverse

معين يا

N. mihrābī.^c Wt. 167.

^c Shaped like the محراب, the arch of the mosque recess.

Both *mu'īnī* pieces are of year 981. To this year also belongs the *mihrābī* mohur of the Kalima type struck at Agra Town—*P.M. Cat.*, 132. The only other known type of *mihrābī* mohur issued from Agra in Ilāhī year 49, month Amardād. A specimen in silver was described and illustrated in the First Part of this paper.

I can give a reference to another double mohur of Akbar. Mr. C. J. Rodgers recorded in his manuscript notes that he sent one to the Madras Museum which weighed 321.3 gr.; the mint was Urdū Zāfir Qarīn (Camp associated with Victory) and year الف (1,000 A.H.).⁷

2. *Obv.*

In triple circle on floral field

الله
اکبر
خورداد اله
ب
ضر اکبر

Rev.

In triple circle on floral field, hawk to right

N. 6 in. Wt. 92 gr. [Pl. XIV. 3.] Vienna.

This is a beautiful and unique half mohur with the figure of a hawk, struck at Agra in Ilāhī year 50, month *Khūrdād*, five months before Akbar's death. It is a worthy companion to the full mohur of the same type at Berlin—First Part, no. 53. On that piece the hawk is facing left.

⁷ The discovery of double mohurs of Akbar largely invalidates Mr. Hodivala's line of reasoning in his paper "Jahāngīr's Cambay Tankas"—*Mem.*, pp. 173 f.

JAHĀNGĪR.

3. <i>Obv.</i>	<i>Rev.</i>
In triple circle on floral field	As on obverse
الله	غاز
لا اله الا	بادشاه
محمد	سلطان
رسول الله	
۱۰۱۴	

Av. 7. Wt. 100-4. [Pl. XIV. 4.] H. Nelson Wright.

I now illustrate the important half mohur bearing Jahāngīr's birth-name Salim, which I was permitted to publish in my paper "The Portrait Medals of Jahāngīr", *Num. Chron.*, 1929, p. 7. It was struck at Agra in 1014 A.H., first regnal year, and in weight is the moiety of Jahāngīr's new heavy mohur. I called this coin an accession piece, but it is more correctly described as a pre-coronation issue as it must have been struck before the official act of accession when Salīm's imperial style and titles were promulgated. Half mohurs of Jahāngīr are extremely scarce. Possibly this Salīmī coin is a half because the name invented by Akbar for the half mohur of his reign was Salīmī, *Mem.*, p. 43. Other Salīmī coins are the Aḥmadābād silver and copper issues—*Num. Chron.*, 1929, pp. 8, 9, and B.M. Cabinet—and the very rare half rupees of Kābul mint of two types, *I.M.Cat.*, 686 and *P.M.Cat.*, 1071.

4. <i>Obv.</i>	<i>Rev.</i>
In triple circle on floral field	As on obverse
بادشاه	همچو ماه
نکیر	ز سکه
۱۷	۱۰۳۲ زر لاهور
نام جہا سنہ	شدرو
مہر	
از نور	

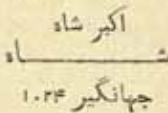
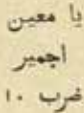
N. 75. Wt. 170. [Pl. XIV. 5.] H. Nelson Wright.

Mr. H. Nelson Wright has permitted me to figure this gold coin of Jahāngīr, Lāhor mint, date 1032 A.H., 17 R.Y. The couplet runs:—

شد روی زر لاهور ز سکه همچو ماه
از نور مہر نام جہانگیر بادشاه

The face of the gold of Lāhor through the stamp became like the moon, from the light of the sun of the name of the emperor Jahāngīr.

The couplet is only found elsewhere on the unique zodiacal mohur, sign Scorpio, of the same mint Lāhor, and the same dates 1032 A.H., 17 R.Y., in the Hermitage Museum, Leningrad. It was figured in Capellus, *Rariora Beccleriana*, Hamburg, 1684. O. G. Tychsen describes it in his *Introductio in Rem Numariam Muhammedanorum*, Rostock, 1794, and gives a revised reading of the legend in the *Additamentum* of 1796. This is far from correct.

5.	Obv.	Rev.
In double circle, outer one of dots		Contained as obverse
		
	N. 45. Wt. 42.5. [Pl. XIV. 6.]	Gotha.

This is a unique quarter mohur of Jahāngīr, mint Ajmer, date 1024 A.H., 10 R.Y., bearing the invocation *Yā Mu'inu*, "O Defender", one of the ninety and nine excellent names of God; it occurs in the name of Jahāngīr's patron saint Shaikh or Khawājah Mu'inu-d-dīn Chishtī, whose shrine was at Ajmer, and who was "the fountain head of most of the saints of India"—*Tūzūk*, Vol. I, p. 1.

Jahāngīr arrived at Ajmer about the end of A.D. 1613 and sojourned there three years. This prolonged visit was important from a numismatic point of view. Pieces of striking and unusual character issued in addition to zodiacal coins, all three kinds of *largesse* money, and two different types of portrait medal (cf. Portrait Medals, *Num. Chron.*, 1929, pp. 21 f.) While Jahāngīr kept his court at Ajmer, "he seemed insane upon the article of paying honours to Chaja."^s The above coin is a fresh token of his devotion to the saint. It is item CCLXVI on page 20 of Moeller's *De Numis Orientalibus in Numophylacio Gothano*, Erfordiae et Gothae 1831.

^s A. Dow, *History of Hindostan*. London, 1772, p. 47. Chaja is the author's way of writing Khawājah.

SHĀH JAHĀN.

6. <i>Obv.</i>	<i>Rev.</i>
In triple circle on floral field	As on obverse
شاه جهان	کند سہر زر
نثار	مہر
شاه خرم غازی	۱۰۳۷ از سر افرازی
۱ سنہ	ضرب لاہور

R. [Pl. XV. 2.] Christ Church Library, Oxford.

This unique and outstanding piece is a silver *niṣār* (*largesse* money), the usual quarter rupee size, of Shāh Jahān struck at Lāhor in 1037 A. H., first regnal year. The imperial title Shāh Jahān is accompanied by the birth-name Shāh Khurram. It is the only known *niṣār* which bears a rhyming distich, and adds another to the solitary couplet of Shāh Jahān in Mr. C. J. Brown's list—*L.M. Cat.*, Vol. I, p. 28. As a Khurram piece this *niṣār* is a companion to the Khurram rupee of Lāhor mint and the same dates—Second Part, p. 363—of which only two examples are so far known. The couplet is:—

مہر کند سہر زر از سر افرازی
نثار شاه جهان شاه خرم غازی

"The sun (or impression) makes a sky of gold through the exaltation of the *niṣār* of Shāh Jahān, Shāh Khurram, Ghāzi."

AURANGZEB.

7. *Obr.**Rev.*

In square area on flowered field

In square area, as on obverse

عالم گیر بادشاه غاز

سنه ۱۰ جلولس میمنت

اورنگ زیب بهادر

ب

محمد

مانوس خمر دار

ابو الظفر محی الدین

ف

سنه ۱۰۸۳

لخلا شاه جهان آباد

In four margins, Persian quatrain

In four margins, Persian quatrain

AR. 4-7. Wt. 2.275 kg. = a little over 5 lb. [PL. XIV. 1; PL. XV. 1.] Gotha.

The quatrains with literal translations appear to be as follows. The lines read from the top of the coin to the left:—

Obverse.

قدر افزای سیم و قیمت زر

سکه بادشاه بحر و بر است

شاه اورنگ زیب عالم گیر

که ز روز ازل بو الظفر است

The stamp of the Emperor of Sea and Land increases the worth of silver and the value of gold: Shāh Aurangzeb 'Ālamgīr, who is the Father of Victory from the beginning of time.

Reverse.

سکه زد بر روی سیم و زر ز الطاف الہ

بادشاه گنج بخش اورنگ زیب دین پناه

باد عالم گیر یارب سکه اش جو تیغ او

تا بود رائج بهفت اقلیم نقد مهر و ماه

"Struck coin on the face of silver and gold through the loving-kindness of God, the treasure-bestowing emperor Aurangzeb, Asylum of the Faith. May, O Lord, his stamp be world-conquering like his sword, so long as his money of the sun and moon (gold and silver) is current in the Seven Climes."

This two hundred rupee piece of Aurangzeb was struck at the Seat of the Khalifate, Shahjahanabad (Delhi) in 1083 A.H., fifteenth regnal year, and is item CCXCIII on p. 26 of Moeller's *De Numis Orientalibus* (*op. cit.*). It was illustrated and described by G. J. Kehr in *Monarchae Mogolo-Indici vel Mogolis Magni Aurenk Szeb Numisma*, etc., Leipzig, 1725, only eighteen years after Aurangzeb's death; the reading is tentative. The phenomenal piece continued to attract attention; references were made to it amongst others by Tychsen, Marsden, and Thomas.⁹ It is mentioned in a short history of the Münzkabinett (1912) by the present Director, Professor B. Pick. Moeller's reading is not correct; the word أَجَل, is much better than أَجَل, "preferable". The Hijra date is 1083 and not 1084. I invite a comparison with the hundred mohur piece of Aurangzeb published and illustrated by J. Gibbs in the *Proceedings of the Asiatic Society of Bengal*, 1885. The dates and mint are the same, in fact the legends in the square areas are the same in substance and arrangement except that the silver piece has سنة ١٠٨٣, "year 1083", and the gold ١٠٨٣, "1083". The two quatrains on the gold piece, with literal translations, are as follows:—

⁹ O. G. Tychsen, *op. cit.*, p. 212. E. Thomas, *op. cit.*, p. 423. W. Marsden, *Numismata Orientalia*, Part II, London, 1825, p. 651.

Obverse.

شاه اورنگزیب عالم گیر
 اسمان قدرت قضاپذیر
 روی زر از فروغ سکه او
 گشت روشن بسان مهر منیر

"*Shāh Aurangzeb 'Ālamgr, as powerful as Heaven (though) accepting Destiny: the face of gold through the splendour of his stamp became bright like the shining sun.*"

Reverse.

شاه عالم گیر دریا کرم اورنگزیب
 انکه از دست سخاوتش آب می گیرد سحاب
 از فروغ سکه اش در عرصه هندوستان
 گشت روشن روی زر چون روی ماه و آفتاب

"*Shāh 'Ālamgr, the ocean of munificence, Aurangzeb, from whose hand of generosity the cloud obtains its water: from the illumination of his stamp in the expanse of Hindostan, the face of gold became bright like the face of the moon and sun.*"

There is a full description of the silver medal in the *Zeitschrift der Deutschen morgenländischen Gesellschaft*, 1868, p. 282.¹⁰ The piece is said to have been brought to Europe by a certain Wouter Falkenier, a member and subsequently governor of a Belgian Company trading with the East Indies. In A.D. 1710 it was acquired in Amsterdam by one Christian Schlegel for the Cabinet of Prince Günther von Schwarzburg;

¹⁰ Dr. W. Pertsch. *Zwei Merkwürdigkeiten der Herzogl. Sammlungen in Gotha.*

the entire Collection of this noble was purchased by Duke Friedrich II of Gotha in 1712.

Dr. Pertsch considered that the medal had been cast and then tooled. But the poor relief of the marginal legends as compared with that of the centre points to the use of a die; it would be almost impossible to obtain a level impression over so large a surface. Three of the four marginal inscriptions of the obverse have been helped out by tooling. The use of a die of the same size has been more successful with the softer metal gold, as in the original of which *B.M. Cat.*, Pl. XXXIII, is a facsimile.

For further information on gigantic coins I invite a reference to Mr. S. H. Hodivala's admirable paper—*Mem.*, pp. 53-80. As regards their purpose, Mr. Hodivala gives ample reason for the conclusion that "these phenomenal issues were merely massive ingots of artistically stamped bullion which were hoarded as stores of value, and occasionally presented to ambassadors, diplomatic agents, and other distinguished persons as complimentary gifts or souvenirs of the imperial favour and munificence". This opinion is based on no less than thirty passages taken from native chronicles. Five of these record the presentation in Aurangzeb's reign of silver pieces weighing two hundred rupees. For example, in 1072 A.H. on the occasion of Prince Mu'azzam's marriage, the Bukhārā envoy was given a gold piece weighing three hundred mohurs, another weighing two hundred mohurs, and two silver rupees of like weight. In 1078 A.H. the ambassador from Balkh received with other presents a gold piece of the weight of one

hundred mohurs, and a silver piece weighing two hundred rupees.

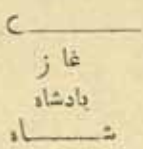
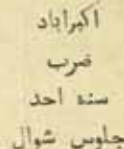
What gigantic pieces have survived the ravages of time? The above medal is the only one I know in silver. Gold medals include a five mohur piece of Akbar in the British Museum—*B.M. Cat.*, 23, a similar piece in the Prince of Wales Museum, Bombay, and a third specimen which was lot 172 in Messrs Glendining's sale of February 28th, 1924. The five mohur piece of Jahāngīr in the British Museum—*B.M. Cat.*, 305, appears to be unique. A two hundred mohur piece of Shah Jahān is illustrated in the B.M. Catalogue from a facsimile in the Marsden collection, and there is a drawing of another piece of the same weight in the *Proceedings of the Asiatic Society of Bengal*, 1883. It cannot be said whether either medal still exists. There is a similar bronze gilt cast of the former piece in the Hunterian Collection at Glasgow. I am informed by Sir George Macdonald that it was quite certainly acquired in Hunter's own lifetime, that is to say, before A.D. 1783; and was probably made at the same time as Marsden's. Mr. F. A. Harrison has kindly called my attention to a third specimen in lead in the Chelmsford Museum. The hundred mohur piece of Aurangzeb belongs to the Maharajah of Gwalior. One like it was at Benares ninety years ago according to Cunningham.

8.	Obv.	Rev.
	عالم کبر	۹
	شاه	سنة
	فلوس	پنته
		ب
		ضر

Æ. Wt. 662. Paris.

This is a double *dām* of Aurangzeb struck at Patna in the ninth regnal year; it is in the Cabinet des Médailles at Paris and was published by Monsieur Georges Bataille in *Aréthuse*, 1927. The double *dām* or full *tankah* denomination becomes extremely scarce after Akbar's reign; I know of only two specimens of Jahāngīr, and one each of the succeeding two emperors. Jahāngīr struck at Ajmer and Bairāt (*Num. Chron.*, 1923, p. 148), Shāh Jahān at Lucknow (*I.M. Cat.*, p. 129), Aurangzeb, the above specimen.

SHĀH 'ĀLAM BAHĀDUR, SHĀH 'ĀLAM I.

9.	<i>Obv.</i>	<i>Rev.</i>
		
	سکه عالم ۱۱۱۹	

A. 85. Wt. 172. [Pl. XIV. 7.] Vienna.

This is a gold piece of Shāh 'Ālam I struck at Akbarābād (Agra) in 1119 A.H., first regnal year. On the reverse is a word which is obscured by a hole,¹¹ but reads with moderate clearness Shawwāl, the ninth month of the Hijra year. Shāh 'Ālam Bahādur was crowned in Muḥarram, (first month), 1119 A.H., but as regards the official date of accession we are told that "On the 1st Shawwāl, 1119 A.H. (25th December, 1707), he (Bahādur Shāh) issued an order that his reign should commence from the 18th Zū'l-hajj (twelfth month), 1118 A.H. (22nd March, 1707), the day that he heard

¹¹ Drilled for the purpose of attaching a ring to the coin.

of his father's death"—*Mem.*, p. 279. There can be no doubt that the above coin was issued on the occasion of this order. It is new and unique, and is the only piece known to me throughout the Mughal series which bears a month of the Hijra Era.

SHĀH JAHĀN II.

10.	<i>Obv.</i>	<i>Rev.</i>
	جهان	مانوس
	صاحبقران	میمنت
	شاه	احد
	با امن و امان ثانی	سنه جلوس
	—————	ضرب
	در جهان زد	سیکاکل ۱۱۳۱

At. [Pl. XV. 3.] Christ Church Library, Oxford.

I described the very rare couplet coins of Shāh Jahān II, Rafi'u-d-daulah, in the Second Part of this paper, and included a preliminary notice of the above coin. It is a rupee of Sikākul, not Kābul mint, 1131 A.H., first regnal year, and exhibits the couplet in full. Sikākul has been identified with Chicacole, a town in the Ganjām District, Madras Presidency. It was the capital of the Mughal *sarkār* of Srikākulam.

MUHAMMAD SHĀH.

11.	<i>Obv.</i>	<i>Rev.</i>
	۱۱ - محمد شاه	جلوس مانوس
	بادشاه غاز	میمنت
	نصیر	احد
	ابو الفتح الدین	سنه دار السرور
	.....	ضرب
		برهانپور

N. [Pl. XV. 4.] Vienna.

The first issue of Muḥammad Shāh from the mint of *Dāru-s-surūr* (Abode of Pleasure) Burhānpūr differs from other coins of that emperor in exhibiting his *laqab* Naṣīru-d-dīn, and his patronymic Abū'l-Faṭḥ (Father of Victory). I published a rupee in the Second Part of this paper—*Num. Chron.*, 1926, p. 405. I was glad to find a gold coin at Vienna.

12.	<i>Obv.</i>	<i>Rev.</i>
	از فضل اله باد	مانون
	۱۱۳۱	میمنت
	شاه	احد
	جهان محمد شاه	سنة جلوس
	سکه	ضرب
	زد در جهان	ملتان

Al. American Numismatic Society.

A rupee of the first year of Muḥammad Shāh, A.H. 1131, Multān mint, in the Cabinet of the American Numismatic Society, New York. The couplet is:—

Zad sikkah dar jahan az faṭḥ i allah
Badshāh i jahān Muḥammad Shāh.

“Struck coin in the world by the grace of God,
 The emperor of the earth Muḥammad Shāh.”

As in two or three other reigns, the first issue of Multān mint is quite unusual; subsequently the mint fell into line with the rest. I had noted this unique coin but omitted to mention it in the description of what I called the Bhakhar couplet of Muḥammad Shāh—Second Part, *Num. Chron.*, 1926, p. 406.

NĀDIR SHĀH.

13.	<i>Obv.</i>	<i>Rev.</i>
	از نادر شاه گیتی	مانوس
	پناه	میمنت
	رو بر مهر و ماه	احد
	سکه	سده جلوس
	1191	ضرب
	داده زیب تازه	مرشدآباد

At. [Pl. XV. 5.] Christ Church Library, Oxford.

This is a couplet rupee of Nādir Shāh struck at Murshidābād mint in 1151 A.H., first regnal year. The distich appears to be:—

داده زیب تازه رو بر مهر و ماه
از سکه نادر شاه گیتی پناه

“ Given beauty fresh of face on the sun and moon (gold and silver)
By the stamp of Nādir Shāh, Asylum of the Universe.

The invasion of India by the Persian conqueror Nādir Shāh and the sack of Delhi administered the final blow to the tottering authority of the Mughal dynasty; henceforth the emperor ruled only in name. These events took place in the cold weather of A.D. 1738-9, 1151-2 A.H. The emperor Muḥammad Shāh was forced to cede Sind and all territories west of the River Indus; the loot of unhappy Hindustan included the celebrated peacock throne. Nādir Shāh struck coin in the imperial Mughal style at several prominent mints in North-West India. The issue of money in

his name so far afield as Murshidābād, the capital of Bengal, is explained in a passage from Gladwin's Bengal Narrative; it was due to the fear inspired by the deeds of the ferocious tyrant, and to the pusillanimity of the Mughal governor. "When Nādir Shāh plundered Dehly, every part of Hindostan was filled with the dread of a visitation by the merciless invader. Sirafrāz Khān (deputy governor of Bengal) ordered coin to be struck and the khutbah to be read in the name of Nādir Shāh, and remitted to him the revenues of Bengal. After Nādir Shāh's departure, these actions were used by his enemies to injure Sirafrāz Khān with Muḥammad Shāh."—F. Gladwin, Bengal Narrative. Calcutta, 1788. P. 155.

This remarkable coin has been noticed by older writers. A specimen of date 1152 A.H. was illustrated by J. D. Koehler in 1746; it does not exhibit enough of the legend to make a satisfactory reading possible.¹² O. G. Tychsen embodied the reference on p. 212 of his *Introductio* (*op. cit.*). Mr. Stanley Lane-Poole's short Catalogue of the Oriental coins at Christ Church, Oxford—*Num. Chron.*, 1886—dismisses the Mughal coins in a few sentences. This rupee of Nādir Shāh is just mentioned. The Ashmolean Museum, Oxford, has a rupee of year 1152, together with the half, quarter, eighth, and sixteenth. All were struck from dies much too large, and the legends are fragmentary. The Kaiser Friedrich Museum, Berlin, possesses all the denominations of year 1152 except the half and the sixteenth. The Christ Church coin, dated 1151, is by

¹² J. D. Koehler. *Historische Münz-Belustigung*. Nürnberg, 1746, Vol. 18, p. 105.

far the best I have seen, and is the only specimen which shows enough of the legend to make the reading fairly certain.

EAST INDIA COMPANY.

14.	<i>Obe.</i>	<i>Rev.</i>
	عالمگیر	علی نگر کلکتہ
	بادشاہ غا ز	ضرب
	ک	سند جالوس
	سکہ مبار	.....

R. 85. Wt. 175. [Pl. XV. 6.] Christ Church Library,
Oxford.

A silver rupee struck at 'Alinagar Kalkatta (Calcutta) in the fourth regnal year of 'Ālamgīr II (A. D. 1754-9).

Fort William was captured by Sirāju-d-daulah, Nawāb of Bengal, on June 20th, 1756 A.D.; the Black Hole tragedy took place the same night. "To perpetuate the memory of this conquest, the Nawāb ordered the name of Calcutta to be changed to Alynagur."¹³ Calcutta was recovered by Colonel Robert Clive and Admiral Charles Watson, coming from Madras, on January 2nd, 1757. Sirāju-d-daulah had been negotiating in the previous month about Calcutta affairs. "There are two things they say the Nabob will not give up, that is the mosque, and the name he gave Calcutta."¹⁴ The conditions proposed by Clive to the

¹³ Stewart's *History of Bengal*. London, 1813, p. 505. 'Alīnagar was probably named after his grandfather and predecessor Aly Verdy Khan.

¹⁴ S. C. Hill. Indian Records Series. *Bengal in 1756-7*, London, 1905, p. 53.

Nawāb on 21st January, 1757 included a proposal that "he suffer the Company to erect a mint in Calcutta endowed with the same privileges with the mint at Muxadavad, and that if the rupees of Calcutta be of equal weight and fineness with those of Muxadavad, they may pass current without any deduction of batta".¹⁵

A treaty was negotiated in February, 1757 between Colonel Robert Clive on the part of the English East India Company, and Sirāju-d-daulah, Nabob of Bengal, "servant of King Allum Gueer, the Invincible". The fifth section of the treaty enacted that "siccās be coined at Allenagur (Calcutta) in the same manner as at Moorshadabad, and that the money struck in Calcutta be of equal weight and fineness with that of Moorshadabad. There be no demand made for a deduction of batta."¹⁶ In March, an authorization issued from the Nabob to the Hon'ble Company for erecting a mint in Calcutta. "From the date of the first of the moon Shaban, the four sun Siccās are begun to be stamp, and through all the mint-houses the new Siccās of the four sun are coined. Take care and erect a mint in Calcutta (called Allenagur), and stamp gold and silver rupees out of the bullion and gold imported by your nation, of the weight of rupees of gold and silver coined at Moorshadabad: under the name of Allenagur-Calcutta shall you coin your money, etc."¹⁷

¹⁵ S. C. Hill, *op. cit.* p. 126. Muxadavad is a popular rendering of *Makhsūsābād*, the old name of Murshidābād. Battā = exchange.

¹⁶ H. Verelst. *History of Bengal*, London, 1772, Appendix, p. 140. Sicca = standard silver rupee.

¹⁷ Verelst, p. 142. "Four sun Siccās" = Siccās of the fourth regnal year (*sanah*) of the nominal emperor 'Ālamgir II.

All this was soon changed by the renewal of hostilities, the Battle of Plassey, and the flight of Sirāju-d-daulah. The new treaty with his successor Mir Jafar Aly Khan was signed in June, 1757. A charter regarding the mint was received from the Nabob at the end of July. "A mint has been established in Calcutta; continue coining gold and silver into Siccas and Mohurs, of the same weight and standard with those of Moorshadabad; the impression to be Calcutta."¹⁸ Clive referred to this deed in his letter to the Court of Directors of January 10th, 1758. "The word Alinagore is, by our present sunnud, to be omitted in the impression on our siccas, an indulgence we could not obtain from Suraja Dowla."¹⁹

This is a summary account of the foundation of the Calcutta mint, and its brief association with the name 'Alinagar. The above coin is a veritable "four sun Sicca of Allenagur-Calcutta", a specimen of the first silver coinage issued from the Calcutta mint. It bears no mark of local origin, unless the small sun on the obverse is a mark of this kind, and is imperial in style.

R. B. WHITEHEAD.

¹⁸ Verelst, p. 145.

¹⁹ Rev. J. Long. *Selections from Unpublished Records of Bengal*, 1743-67. Calcutta, 1869. Sunnud = deed, charter.

X.

SOME NOTES ON THE ARRAS HOARD : INCEPTION OF *SOLIDUS* STANDARD ON BRITISH MODEL IN MEDALLIONS OF CONSTANTIUS CHLORUS.

[SEE PLATES XVI-XVIII.]

1. *Circumstances of Find—Melting down of Great Medallions.*

No find of Imperial Roman Coins can compare either in richness or in historic interest with that made by some labourers in a brickfield at Beaurains near Arras on September 21, 1922. The first general description of the Arras hoard, by Monsieur Jean Babelon of the Cabinet des Médailles, and Monsieur A. Duquénoy, Curator of the Arras Museum, saw the light two years later in *Arethuse*. This, though it contained illustrations of eight other gold medallions, was mainly devoted to an account of its wonderful piece of ten aurei, celebrating the triumphal entry of Constantius Chlorus into London in A.D. 296.¹

A further considerable contribution to our knowledge of the hoard was afforded by Miss Agnes Baldwin's very careful study of four additional medallions, two of the first tetrarchy and two of Constantius Chlorus, published by the American Numismatic Society in 1926.² This brings the total number of gold medallions

¹ *Médailleurs d'or du Trésor d'Arras ; l'Entrée de Constance Chlore à Londres en 296 après J.-C.*, *Arethuse*, January, 1924.

² *Numismatic Notes and Monographs*, No. 28. One of the medallions of Constantius had been illustrated by Mr. Schulman in the *Jaarboek voor Munt- en Penningkunde*, 1923, p. 80.

found in this deposit of which we have an actual record—including one in the possession of an American collector, and another, first described in this paper—up to seventeen. But many more are known to have been melted down, and the report of the workmen themselves carries the score of the larger pieces found up to fifty.³ The number of aurei brought to light must have amounted to at least 400. The coins were in two vases, one of clay and one of silver, and clearly belonged to two distinct lots, one of the age of the Antonines and the other containing specimens ranging over a period almost exactly corresponding with the reign of Diocletian. With them was found a quantity of silver plate and jewellery including necklaces set with cameos, rings, bracelets, and gold pendants representing coins with decorative borders.

As to the bulk of the hoard, the circumstances of the find itself have made it impossible for a collective record to be presented. The coins when discovered were immediately divided among the workmen employed at the brickfield and most of them passed, provisionally at least, across the neighbouring Belgian frontier. From information that I have been able to collect on both sides of the border some of the medallions far surpassed in size and weight any known specimens of the class. The bulk of them were taken to a goldsmith and dealer in antiques in Ghent and, as he was accustomed to rough and ready calculations of weight, his estimate that the two largest medallions together scaled somewhat over a kilogram may be

³ Cf. A. Baldwin, *op. cit.*, p. 2.

accepted as fairly accurate. It agrees with the workmen's version that some of the coins were "as big as a saucer".

According to the dealer's account, one of these great pieces showed on its tail side a chariot, which suggests a comparison with the gold medallions of Constantius II where he is seen seated facing, in a chariot drawn by six horses.⁴ The aureus type of Maximian from the Arras hoard itself (Pl. XVII. 8) shows the Emperor in a facing quadriga. Similar scenes in which the chariot is in profile recur on cameos of the Constantinian epoch, the oval field of these being better fitted for this version of the scene. The other superlatively large medallion was described as depicting a "battle" and it must be supposed that in this case some design was presented, of the class in which the imperial horseman rides down his barbarian foes. The most battle-like of these types is the gold medallion of Numerian⁵ in which he and his father Carus, advancing from opposite sides, aim their lances at a disordered group of Sarmatians beneath their horses' hoofs.

The estimated weight of the two pieces leads to the conclusion that each represented a piece of 100 *aurei* according to Diocletian's 60 to a pound standard.⁶ The great Antioch medallion of Valens, the largest hitherto

⁴ Gneecchi, *Medaglie Romane*, i, Pl. II. 1.

⁵ Gneecchi, *op. cit.*, i, Pl. IV. 7.

⁶ 100 aurei on this standard would weigh 530 grm. I am indebted for this information to Monsieur Charles Dupriez, the Brussels numismatist, who obtained it from the dealer at Ghent. He was himself led to the conclusion that the two great medallions represented in each case 100 *aurei*.

known, apart from its loop, would have weighed somewhat under 400 grammes.⁷

That it should be impossible more nearly to describe these two great pieces and the mass of other gold coins and medallions from the hoard that came into the Ghent dealer's hands is due to what can only be described as a numismatic tragedy.

The Curator of a local museum, informed of his acquisitions, paid the goldsmith a visit, and after examining the coins pronounced the whole to be the work of a forger. It appears that this museum expert had a good general knowledge of Roman coins and the sight of so many unexampled gold pieces, some of them of quite abnormal size, completely dazed his critical faculties. It was in vain that the purchaser of these precious objects pointed out that, owing to personal knowledge, he could vouch for the good faith of the workmen who had brought to him some of the largest. The Curator even went further and "as a friend" warned the dealer that if he were found in possession of objects of such a fraudulent character he might find himself in difficulties with the police. Left to himself, the owner of the coins, thinking that it might be difficult for him to prove their genuineness in view of this "expert" opinion, decided, against his better judgement, to have them melted down, having, as a previous precaution, hammered them so as to obliterate the designs. At the same time a heap of *aurei*, weighing an amount that it is impossible to ascertain, was similarly treated.

⁷ Gnecehi, *op. cit.*, Pl. XVII. 1, and p. 36, No. 9; Cohen, vol. viii, pp. 104, 105, No. 17. Including the loop, it weighed 407 grm. 30 c.

2. *Gold Medallions and Aurei relating to the Recovery of London and the Province of Britain by Constantius Chlorus in 296 B.C.*

The "London medallion" itself was only saved from a similar fate by the conscientious scruples of its possessor. The labourer to whose share it had fallen was to such an extent afflicted with doubts as to how far he was its rightful owner that he consulted his father confessor, who lived on the Belgian side of the frontier. The priest, on religious grounds, bade him take it back to his employer, and this important piece was thus saved from the melting-pot.

This remarkable medallion may truly be said to supply the most valuable existing memorial of the important place that London occupied in the Roman Empire at the end of the third century. As it has not yet been illustrated in the Numismatic Chronicle, it is here reproduced on Pl. XVI. The following is a summary description.⁶

Obv. FL VAL CONSTANTIVS NOBIL CAES Laureate bust of Constantius Chlorus to right with cuirass and mantle.

Rev. REDDITOR LVCIS⁷ AETERNAE Emperor on

⁶ A full account of this medallion, together with an illustration enlarged to two diameters, was given in the paper already referred to by Messieurs Jean Babelon and A. Duquénoy in *Arethuse* (Jan. 1924, Fasc. 2), *Médailles d'or du Trésor d'Arras; l'Entrée de Constance Chlore à Londres en 296 après J.-C.* It has also been frequently reproduced elsewhere (cf. too G. F. Hill in *Roman London* (R. Comm. on Hist. Monuments, 1928), p. 188 and Pl. 67).

⁷ It is impossible to accept Dr. Alföldi's reading (*Z. f. N.*, 1927, p. 171) LEGIS AETERNAE. It was doubtless due to the photographic enlargement in *Arethuse*, where the V has evidently taken the appearance of an E. But, on the coin itself, the V

pacing horse, laureate and in full armour, holding spear. Below is a transport galley showing four helmeted soldiers—the upper part of their shields being visible¹⁰—and with indications of water below. In front, at the turreted city gate, is a half-kneeling figure of the City of London personified: LON appearing beneath her. She holds out her hands to acclaim the advancing emperor, who is about to pass through the gate. In the exergue P TR—*percussa Treveris*. Wt. 52.88 grm.¹¹ [Pl. XVI. 1.]

This piece, as the weight indicates, is a *denio*, representing 10 aurei of Diocletian's 60 to a pound standard, weighing each about 5.3 grm.

The reverse type of this coin affords an interesting commentary on the account of the relief of London contained in the well-known passage of his panegyrist.¹² The orator makes a special point of the spectacle provided by Constantius' vessel, which had sailed up the Thames. The British inhabitants with their wives and children, are depicted as collected on the shore, not only worshipping their liberator "as if fallen from the sky" to the extent of letting him "walk over their prostrate bodies": *sed etiam navis illius quae tuum numen advexerat vela remigiaque venerantes*. Once again they are free, once again they are Romans, "tandem vera imperii luce recreati". So great is

is clear, and of the C there is no doubt. We have here an instance of the danger of accepting the impressions given by photographs of inscriptions on coins without reference either to the original or to a cast, where the lettering can be studied with various incidences of light.

¹⁰ This detail seems to have hitherto escaped notice.

¹¹ As weighed by Monsieur É. Bourgey. In *Arethuse* its weight is given as 53.10 grm.

¹² *Incerti Panegyricus Constantio Caesari dictus*, c. 17 (*Panegyrici Latini*, ed. A. Baehrens, pp. 243, 244).

the correspondence here between the account of the panegyrist and the design on the medallion that it may well be asked whether he had not this official record before his eyes.

The reference to the restoration of the "Roman light" recurs again in an oration of Eumenius,¹³ who says of Britannia that, from being whelmed as beneath the sea,—"*profundissimo poenarum gurgite liberata, ad conspectum Romanae lucis emersit*".

The "Lux aeterna" may in the case of Constantius have also had a special personal bearing as suggested by Messieurs Babelon and Duquénoy¹⁴ and reflect the solar cult that he had inherited from his ancestor Claudius Gothicus. At the same time, it may be recalled from the British point of view that the cult of SOL INVICTVS had been well looked after by Carausius who had even claimed a special association with Mithra.¹⁵

An interesting point about the reverse type of this medallion is the fact that the galley with the armed emperor on horseback above was taken over onto a contemporary *aureus*-type struck, severally, in the name of Diocletian, Maximian Herculius and Constantius Chlorus, with the legend VIRTVS ILLYRICI. The known specimens, of which one of Maximian from the Arras find itself is given in Fig. 1¹⁶ are all from the Treves mint¹⁷ and none seem to exist

¹³ *Pro instaurandis Scholis* (ix). Baehrens, *op. cit.*, p. 200.

¹⁴ *Arethuse*, *loc. cit.*, pp. 5 seqq.

¹⁵ Compare the reverse type INVICTO ET CARAVSIO.

¹⁶ See below, p. 263, No. 16.

¹⁷ Cohen, Diocletian, 515; Maximian Herculius, 621; Constantius Chlorus, 307. All bear the exergual mark TR.

in the name of Galerius, which is the more remarkable since Illyricum was under his government. The allusion to Constantius' relief of London is obvious from the type, and it has been suggested by Professor



FIG. 1.

Alföldi¹⁸ that the explanation is to be found in the participation of Illyrian troops,—then representing the “crack” element in the Roman army,—in the expeditionary force. The detachment of this contingent from the Danubian region—by the orders, probably, of Maximian—would have enabled the higher members of the tetrarchy to claim a direct share in the victorious attack on the British usurper. If we take the evidence of this coin-type literally we may infer that Illyrian guards formed part of the force that found its way, more by fortune than design, up the Thames estuary.

The medallion itself is in the Arras Museum. It also has the unique distinction among coins of having been scheduled as a National Monument of France. Considering that it is at the same time the most interesting memorial that exists of Roman London,

¹⁸ *Zeitschrift für Numismatik*, 1927, p. 170. Professor Alföldi had been independently led to recognize the dependence of the aureus-type reading **VIRTVS ILLYRICI** on that of the London medallion.

we may perhaps be allowed to regard this as a special tribute to the *Entente Cordiale*.

Two *quinios* also relating to the same episode of the recovery of Britain have been happily acquired by the British Museum,¹⁹ and, by the kindness of the Keeper of the Coin Department, they are illustrated beside the great *denio* in **Pl. XVI. 2 and 3**.

The reverse types here are from the same die, but the busts on the obverse contrast considerably with one another. The obverse (**Pl. XVI. 3**) in one case shows the laureate bust of Constantius, draped in a richly embroidered mantle and holding the eagle sceptre, the inscription being: **FL VAL CONSTANTIVS NOB CAES**. This piece weighs 26.79 grm.

On the obverse of the other medallion (**Pl. XVI. 2**) the emperor appears as Hercules, coifed in the lion's skin, and his face is one of the last fine attempts at Roman imperial portraiture. The physiognomy itself fits in with the aristocratic Roman ancestry of Constantius, and the mild expression reflects what all authorities agree as to his disposition.

The reverse type of both these pieces belong to the same die. It bears the legend **PIETAS AVGG**, and shows Constantius crowned behind by Victory, his left hand resting on a spear and in full military costume, raising the half-kneeling figure of Britannia, who holds a spear and a shield—oblong, in place of the usual oval shape—with a small central boss. The exergue bears the Treves mint-mark, **PTR**. From the military character of the half-kneeling figure we may in this case

¹⁹ See Hill, *Brit. Mus. Quart.* ii (1924), p. 83, and cp. *Arethuse*, *loc. cit.* Pl. VIII. 506.

recognize the recovered Province as a whole rather than the City of London as seen on the larger medallion.

3. *Supplementary Evidence acquired of the Contents of the Hoard.*

Apart from the scattered nature of the evidence, the interest of the great medallions has somewhat distracted attention from the smaller gold pieces that formed the great body of the hoard. Miss Baldwin²⁰ observes that the number of the *aurei* is conjectured to have been upwards of 300, and additional evidence that has since come to hand must considerably raise that estimate. She herself had seen about 130 at Arras, 87 of which were of the period of the Antonines. About 80 belonging to the period Diocletian to Constantine the Great were in the Ratto Sale Catalogue, April, 1923. Unfortunately, however, the evidence was confused by the inclusion with the same attribution in the Catalogue of other coins of Constantine in an inferior condition, and dating from 313 onwards.

In finds of this kind, where workmen divide the booty and the actual rights of ownership are doubtful, it is a common practice for the possessors of parts of the "treasure trove" to keep their share to themselves for a time sufficient to allow urgent official researches to die down. Sometimes many years thus elapse before part of a find is "released", and this phenomenon is by no means confined to the case of coins.

²⁰ *Op. cit.*, p. 33, n. 4. and cp. pp. 7, 8.

It is doubtless due to this cause that, though entering the field late in the day, I have been able to collect evidence of a number of specimens that were certainly not accessible to those who had the first opportunity of inspecting the material. Amongst these, in addition to about 30 *aurei*, several of them unpublished, is a gold medallion—a *quinio*—of Constantius Chlorus, presenting new and interesting features. Thanks to the courtesy of the Keeper of the Coin Department, and the kind assistance of Mr. H. Mattingly, I am also able to describe about 28 *aurei* from the hoard now in the British Museum, together with three silver coins. It is thus possible to give an account of 47 different types of *aurei* from the hoard together with duplicates of some of them.

A detailed knowledge of so much material may be regarded as affording at least a sample of the character of the hoard as a whole. One result of this has been to show that the nucleus of the later part of the deposit is to be found in a recurring series of closely related types, a large proportion of them in mint condition—which enables us to fix within a very narrow compass the date at which the hoard—as a hoard—was withdrawn from circulation, several years earlier than has been hitherto supposed. Connected with this result, moreover, is the interesting metrological conclusion that the partial introduction of the *solidus* system at Treves was due to the financial policy of Constantius Chlorus. This system was indeed itself identical with that which had been preserved by the British usurpers from the days of Diocletian's earlier standard of 70 *aurei* to a pound, to which it approximated.

4. *Unpublished Medallion (quinio) of Constantius
Chlorus as Caesar.*

Obv. FL VAL CONSTANTIVS NOBIL CAES
Laureate bust to left, draped with mantle showing
wreath in front. Constantius holds sceptre sur-
mounted by eagle.

Rev. TEMPO RVM FEL ICITAS Front of tetrastyle
temple showing wreath within pediment, before
which two emperors pour libations on a tripod
altar, to the right of which is visible the forepart
of a sacrificed bull. Behind is a *tubicen* sounding
his pipes and two *camilli* stand on either side.
The heads of the emperors are in each case sur-
rounded by a *nimbus*. The exergual space is
inscribed CAESS XIII COSS V and, below,
P TR

Weight 20.25 grm.; diam. 32 mm.: *quinio*.
[Pl. XVI. 5.]

From the point of view of the Arras hoard itself this piece derives a particular interest from the fact that two gold medallions of Constantius with similar obverse and reverse types occurred in it presenting the title of Augustus, and therefore evidently struck in the immediately succeeding time. One of these is published in *Arethuse*.²¹ The other is described and illustrated in the excellent article under the signature of Agnes Baldwin on "Four Medallions from the Arras Hoard", published by the *American Numismatic Society* in 1926, pp. 23 seqq. and Pl. III. As Constantius was made Augustus on May 1, 305,

²¹ Jean Babelon et A. Duquénoy, *Médailles d'or du Trésor d'Arras (Arethuse)*, Pl. VIII. 7. See, too, É. Bourgey, *Les Médailles d'or du Trésor d'Arras* (Catalogue of electrotype reproductions), No. 4.

and died at York, exhausted by the hardships of his Caledonian campaign, on July 25, 306, the emission of these coins can be absolutely fixed between these two dates.

On the present piece the fact that the emperor was still only Caesar and the insertion into the exergual space of the inscription **CAESS XIII COS V** enables us to assign still narrower limits to its date of issue. It is specially stated by Lactantius and, in agreement with him, by Aurelius Victor that both Constantius Chlorus and Galerius Maximianus held the dignity of Caesars for thirteen years.²² These thirteen years began in A. D. 292, and ended therefore in 305. Since Constantius became Augustus on May 1, 305, it follows that this *quinio* on which he still appears as Caesar for the thirteenth year must have been struck sometime during the first four months of that year. Rarely can the date of a Roman coin be fixed within such narrow limits.

It will be seen that the obverse type of this piece corresponds not only in its general features but in minute details, such as the wreath on the breast-plate, with that of a *quinio* of Diocletian,²³ also from the Arras find, weighing 26.50 grm. and belonging therefore to the standard of 60 to the pound. This medallion (Pl. XVI. 4) was also struck by the Treves mint and records the eighth Consulship of Diocletian, which a parallel piece

²² Aur. Victor, c. xl. 'Cum sane uterque (sc. Constantius et Galerius) potentiam Caesarum annos tredecim gessissent.' This is confirmed by Lactantius, *De M. P.* c. xvii. Clinton, *Fasti Romani*, (s. a. 305) observes as to this dating that the thirteen years in reality began in 292 (and not as Idatius makes it 291) and ended in 305. The *Fasti* of that year make the two Emperors as Consuls still *Caesares*.

²³ Babelon et Duquénoy, *Arethuse*, loc. cit., Pl. VIII. 12.

of Maximian²⁴ refers to the seventh Consulship of that emperor. This association points to the year 303, the year of the great persecution of the Christians. The mint authorities at Treves took this Diocletian type as a model for the *quinio* of Constantius struck slightly later and, as we shall see, on a new and reduced standard. The reverse type itself—the two emperors, in this case Diocletian and Maximian, sacrificing, represents a variant of the same theme, while the inscription **FELICITAS TEMPORVM** only differs in the order of words.

It is therefore clear that the occasion of this type was the *susceptio* by Diocletian—in which his colleague Maximian shared—of the *Vicennalia Vota*. Bearing this fundamental consideration in mind, it seems probable that in this case, too, we must recognize the two Augusti rather than the Caesars and the fact that they are both *nimbati* will be seen to bear out this conclusion. It will be shown below that under Constantine the Great and his son and namesake, who at first assumed a kind of guardianship of his younger brothers, the surrounding of the head by a *nimbus* was used as an expression of the superior dignity of the imperial personage represented.²⁵

On the later piece (Pl. XVI. 6) the nimbus is omitted above the heads of the sacrificing emperors, since the new Augusti, Constantius and Galerius, could hardly receive such a badge of supreme dignity in the lifetime of the *Seniores*.

²⁴ *Ibid.*, Pl. VIII. 4. *Rev.* HERCVLI CONSERVATORI AVGG ET CAESS NN—PTR. Hercules with lion's skin resting on club and holding apples of Hesperides.

²⁵ See below, pp. 237 seqq.

Comparing the designs on this piece with those of the slightly later issue it will be seen that the emperor's bust on the obverse is more compactly rendered, allowing for a somewhat greater display of the drapery below. In the case of the Augustus the head is slightly larger. It has been described by Miss Baldwin as the best existing portrait of Constantius,²⁶ setting off his finely-cut profile, the mark of his aristocratic Roman blood, and contrasting with the less distinguished features of Diocletian and Maximian, respectively of Dalmatian and Pannonian peasant origin. The head of Constantius as Caesar on the present piece is also finely executed, though, partly on account of its somewhat lesser dimensions, it is not quite so striking as the other.

The reverse of the earlier *quinio*, besides the inscription supplying the dates, differs in certain well-marked details.

The columns of the temple itself are better illustrated on the later type and present two noteworthy architectural features. The columns are spirally fluted and there are traces of arches springing directly from the capitals—an anticipation of Romanesque, such as, from Diocletian's time onwards, became more and more perceptible in buildings. In the peristyle of his palace at Spalato arches are already interposed between the capitals and the entablature.²⁷

A further point of difference in the medallion before us is the inclusion of the forepart of the victim

²⁶ *Op. cit.*, pp. 26-28. But the newly published type, Pl. XVI, 2, may be thought to be even finer.

²⁷ R. Adam, *Ruins of the Palace of the Emperor Diocletian at Spalato in Dalmatia* (1764), Pl. XI.

in the sacrificial scene, which is absent on the other type.

5. *Appearance of the Nimbus round the Imperial Head.*

Another feature on the present specimen not found in the later variety is of still greater interest. This is the appearance of a *nimbus* round the head of each of the sacrificing emperors.

The rayed type of nimbus—like that common to Apollo and the Phoenix—had already appeared in the case of a reverse type about the head of Antoninus Pius.²⁸ Otherwise, this is strictly speaking the first appearance of this symbol in its plain circular form on the regular coinage of the Roman Empire. It is already seen indeed about the heads of two members of the tetrarchy on the remarkable lead model, probably intended for a gold medallion, found in the Saône at Lyons in 1862 (Fig. 2).²⁹ This is inscribed **SAECVLI FELICITAS** and is divided into two compartments, the lower part showing the bridge over the Rhine between Kastel (**CASTEL**) and Mainz (**MOGONTIA-CVM**) while the two, apparently bearded, emperors with the nimbus round their heads are seen in the upper section in the act of distributing largesse. This design was connected by Babelon with the recrossing of the Rhine by Herculus after a successful expedition on the German side in A.D. 287. Dr. Alföldi, however, has recently called this conclusion in question. He

²⁸ Cohen No. 318. *Rev.* **COS IIII SC** (of A.D. 145). Antoninus is in military uniform, holding spear and olive-branch.

²⁹ Babelon, *Traité des Monnaies grecques et romaines*, Pt. I, pp. 947, 948, and Fig. 34.

points out that the main theme is *largitio* rather than a celebration of victory, and recognizes in the imperial personages members of the second tetrarchy. He regards A.D. 296 as a *terminus post quem* for the date of the design.³⁰



FIG. 2.

Already, in a speech of 289, the panegyrist Eumenius had spoken of the *nimbus* as an attribute of the imperial dignity, in conformity with Diocletian's ordinance that the emperor was already a god to whom prayers should be addressed in his life-time. He describes it as *lux divinum verticem claro orbe complectens*.³¹ In the case of Constantius Chlorus, moreover, who may have inherited a special cult of SOL INVICTVS from his ancestor Claudius Gothicus, this solar emblem would have had a special appropriateness.

³⁰ *Z. f. N.*, 1927, p. 170.

³¹ Eumen., *Paneg.*, c. II. 3. Cf. Seeck, *Z. f. N.*, xxi, p. 45.

After a short interval the *nimbus* makes an emphatic re-appearance about the obverse three-quarters-facing head of Constantine on a *solidus* of his Fourth Consulate, dating from A.D. 315,³² and is repeated round his full facing head upon another clearly contemporary *solidus*, like the former from the Ticinum mint.³³ It is again seen upon the head of Licinius and his infant son on a gold medallion of A.D. 320-324, struck at Nicomedia, the reverse type of which, it may be observed, is purely pagan, namely Jupiter enthroned. So too we see it round the head of the empress Fausta in the reverse of a gold binio of two solidi, struck at Treves about A.D. 325.³⁴

A remarkable silver medallion of Constans, from the Siscian mint, struck shortly after the death of his father Constantine the Great in 337, when he and Constantine II assumed the Augustan title, shows a group of three seated emperors, the central one of which is nimbed and raises his hand in the act of benediction.

There exists also a large bronze medallion of Constantine, struck at Rome with the legend **SALVS ET SPES REIPVBLICAE** (Fig. 3),³⁵ which has an important bearing on the interpretation of a somewhat

³² O. Seeck, *Z. f. N.*, xxi, p. 46, gives reasons for this date. There is a possible range between A.D. 315-318.

³³ This and the preceding type were published by Seeck, *loc. cit.* Cf. too Maurice, *Num. Const.*, ii, Pl. VII. 19, 20. Both pieces were in the rich Trau collection at Vienna.

³⁴ Grecchi I, Pl. VIII. 10 (p. 22, 1). Fausta is seated with an infant in her arms between Felicitas holding a caduceus and another female figure. The inscription is **PIETAS AVGVSTAE**.

³⁵ Cohen, 2nd ed., No. 481, who cites a gold medallion with a closely similar reverse and the same inscription from the Old Cabinet (No. 480).

similar silver medallion issued under the auspices of his son Constantine II. On the bronze piece the Emperor is seen enthroned with a nimbus round his head and his right hand raised in the act of benediction, while on



FIG. 3.

either side of him stand two Caesars holding spears. Crispus and Constantius II, who may be probably recognized in these, were made Caesars in 317.

This piece really supplies the best commentary on a remarkable silver medallion issued in the name of the younger brother Constans by the Siscian mint, shortly after the death of his father Constantine the Great, in A.D. 337.³⁶ Here again we meet with a group of three emperors, in this case all seated on three thrones placed side by side, the central figure, however, being of superior stature, and distinguished from the other two by a nimbus round his head and with his hand, as in the other case, in the act of benediction.

There was a natural inclination to see in the figure

³⁶ Gneecchi No. 1, Pl. XXX. 2; Bernhart, *Handbuch*, Pl. LXII. 11; Cohen No. 28. *Rev. inser.* FELICITAS PERPETVA: VOTV; in ex. SIS. He cites a *solidus* (Khell) with the same reverse, No. 27. Examples exist both at Paris and Berlin (cf. Seeck, *Z. f. N.*, xxi (1898), pp. 44 seqq.)

thus distinguished Constantine himself as *divus*, blessing his heirs to the supreme dignity. As Seeck, however, pointed out,²⁷ there were at this time three Augusti, Constans himself and his two elder brothers Constantine II and Constantius II, and it is impossible to suppose that one of them was omitted from the group. The explanation is to be found in the fact, of which there are other historical indications, that the younger Constantine, the elder of the three, had assumed a predominant position, which he was able to maintain awhile in the dominions assigned to his youngest brother Constans, then a mere boy.

From this time onwards the appearance of the simple *nimbus* round the heads of emperors is well exemplified throughout the fourth century, though generally on large show pieces struck on special commemorative occasions. Such are the triumphs in which the emperors ride in chariots drawn by four elephants or by six horses. Valens thus appears as a conqueror on his huge gold medallion—intended apparently to represent 100 *solidi*²⁸—on horseback in all his glory and the tradition of this vain-glorious equestrian type was kept up by Justinian in his great gold medallion formerly in the Cabinet of France, on

²⁷ Seeck, *op. cit.*, pp. 42 seqq., who was not, however, aware of the parallel medallion of Constantine I. In the regions allotted to his youngest brother Constans, then only fifteen, in the Illyrian diocese of which this piece was struck, he seems to have practically assumed the regency. On a parallel type in gold from the Thessalonican mint (*op. cit.*, p. 54 and Pl. II. 6) all three emperors are represented on a uniform scale, without any sign of separate distinction such as the *nimbus*.

²⁸ It weighs, with its loop, 412.720 grm. (Gnecchi No. 9, Pl. XVII. 1). Another (*ibid.*, No. 8), weighing 219.490 grm., must be reckoned as its half or 50 *solidi*.

which the helmeted head of the obverse is also surrounded by the *nimbus*. It is well known that on the mosaic of Santa Maria Maggiore a *nimbus* surrounds the head of Herod³⁹ in order to mark his royal dignity. But it certainly did not invest the massacre of the Innocents with any saintly attributes!

6. *Monetary System implied by the Gold Medallions:
Inception of Solidus System.*

The comparative weight of these "medallions" suggests some interesting monetary questions.

The piece struck by Constantius as Caesar weighs 20.25 grm.; two fellow medallions with the Augustan title, from the same die, weigh respectively 21.35 grm. and 21.41 grm., giving a mean weight of 21.38 grm.

In Miss Baldwin's paper referred to, the "Augustan" specimen there published weighing 21.35 grm. is spoken of as a *quinio* of 5 *aurei*.⁴⁰ But this description, due no doubt to the fact that the regular issue of *solidi*, as hitherto fixed, did not begin till about A.D. 315, does not seem to be admissible. For it is clear that the *aurei* answering to the then legal weight of 5.457 grm. or 60 to the pound at that time current scale only slightly under that amount. An average weight of about 5.4 grm. is constantly maintained.⁴¹ The *quinio* of this series should therefore weigh about 27 grm.

³⁹ See Schultze, *Archäologie der Christlichen Kunst*, p. 236.

⁴⁰ *Op. cit.*, p. 24.

⁴¹ The weight of a series of well-preserved specimens is given by Missong, *Z. f. N.*, 1880, pp. 285, 286. *Aurei* with the Σ sign marking them as 60 to a pound were first issued soon after Maximian's accession in A. D. 286 down to 312.

We find in fact the following examples :

Diocletian **CONSERVAT· AVGG** &c. Fourth Consulate, A. D. 290 (Gnecchi 1). *Quinio* = 26.25 grm.

— **IOVI VICTORI AVGGV** &c. Fourth Consulate. $\frac{1}{2}$ *quinio* ($2\frac{1}{2}$ aurei) = 12.91 grm. (representing *quinio* of 25.82 grm.).

— **CONSVL VI** &c. A. D. 296 (Gnecchi 2).⁴² $\frac{1}{2}$ *quinio* ($2\frac{1}{2}$ aurei) = 13.8 grm. (representing *quinio* of 27.6 grm.).

So, too, *denios* of Diocletian range from 52.3-53.59 grm.

Maximian **PERENNIS VIRTVS AVGG** Rome mint (Gnecchi 5). *Quinio* = 26.98 grm.

— **PERPETVA CONCORDIA AVGG**: Rome mint (Gnecchi 6). *Quinio* = 26.93 grm.

— **IOVI VICTORI AVGG V ET IIII COSS** A. D. 293.⁴³ *Quinio* = 27.08 grm.

That most of the other gold medallions found in the Arras hoard belong to the same standard of 60 to the pound is evident. Thus we find, following the weights recorded:⁴⁴

Diocletian (*Arethuse, loc. cit.*, Pl. VIII. 3). *Rev.* **IOVI CONSERVATORI AVGG**: Wt. 26.65 grm.

Diocletian (*ibid.*, 3). *Rev.* **FELICITAS TEMPORVM P T R**: Wt. 26.5 grm.

Maximian (*ibid.*, 4). *Rev.* **HERCVLI CONSERVATORI AVGG ET CAESS NN - P T R**: Wt. 25.1 grm.

⁴² *Num. Z.*, 1887, p. 18.

⁴³ All these three medallions are from the Bregetio (Old Szöny) hoard. With them, however, was found one **VIRTVTI AVGG V ET IIII COSS**, **S·M·T·** in ex., weighing only 20.040 grm. (Gnecchi 7).

⁴⁴ Babelon et Duquénoy (*Arethuse, loc. cit.*), pp. 7, 8, and cf. Étienne Bourgey, *Les Médaillons d'or du Trésor d'Arras* (note of medallions reproduced in electrotpe).

The medallion of the Tetrarchy (A. Baldwin, *Four Medallions from the Arras hoard*, No. 4) weighs 54.40 grm., equivalent to the *denio* of an *aureus* of 5.44 grm.

The joint medallions of Constantius Chlorus and Galerius (*ibid.*, No. 1), *Rev.* PRINCIPVM IVVEN TVTIS—PROM weighs 54.27 grm., a *denio* of the same system.

Constantius Chlorus (*ibid.*, No. 2), *Rev.* MARTI VIC TORI—TR weighs 26.15 grm.

— (*Arethuse*, *loc. cit.*, No. 8), *Rev.* VIRTVS AVGG—TR weighs 27 grm.

So, too, we find that the remarkable medallions of Constantius Chlorus referring to the recovery of Britain in 296 conform to the same standard of 60 *aurei* to the pound. As already pointed out, the largest of these (*Arethuse*, No. 1) *Rev.* REDDITOR LVCIS AETERNAE—PTR on which the kneeling figure of Londinium personified (LON) greets her liberator, scales 52.88 grm., answering therefore to a *denio* of an *aureus* of 5.28 grm.

The two smaller medallions, now in the British Museum (Pl. XVI. 3. 3), in which the emperor raises the armed kneeling figure of Britannia, weigh respectively 26.79 grm. and 25.85 grm.

On the other hand, when we come to the large gold medallion of Constantine the Great from the Arras hoard ⁴⁵ we are at once confronted with the new system to which the above-mentioned *quinios* of Constantius Chlorus belong. A summary description of the piece is here given :

⁴⁵ Babelon et Duquénoy, *op. cit.*, Pl. VIII. 9 ; A. Baldwin, *op. cit.*, pp. 4, 5, and Fig. 1.

Obv. IMP CONSTANTINVS PIVS FELIX AVG
Laureate bust to right with mantle and *paludamentum*.

Rev. PRINCIPI IVVENTVTIS Constantine as *imperator* in full military costume holding spear and orb. In ex. PTR. Wt. 40.25 grm.

It will be seen from the weight that this piece represents the double of the above-cited medallions of Constantius Chlorus, and represents therefore the *denio* of the same series.

Its reverse type answers in fact to that of an early *solidus* of Constantine found in the Arras hoard.⁴⁶ The same reverse type and inscription also appears on a double *solidus* of Constantine weighing 8.65 grm., struck at Ostia,⁴⁷ and on more than one of them showing a laureate bust—representing one and a half *solidus* from the mints of Treves, Ticinum and Rome.⁴⁸ As mentioned below,⁴⁹ it also occurs on a *triens* of the same system.

Cohen and Gnechi⁵⁰ had already published a gold medallion from the Berlin Collection struck by Constantius Chlorus as Augustus (A.D. 305-306), belonging to the same system. It is from the Siscian mint and bears the reverse inscription **CONCORDIA AVGG ET CAESS**, and shows Severus II offering a globe to Constantius while below is a wreath with **XX**. Its weight is 20.775 grm.

⁴⁶ A. Baldwin, *op. cit.*, pp. 4, 5, and Fig. 2. Miss Baldwin (p. 34, n. 16) rightly recognized the corresponding medallion as a *denio* on the *solidus* basis in spite of its somewhat light weight. A specimen in the Gotha Cabinet is mentioned by Maurice, *Num. Const.*, i, p. 399. It weighs 4.75 grm.

⁴⁷ Cohen No. 410.

⁴⁸ Cohen Nos. 411, 412.

⁴⁹ See below, p. 256.

⁵⁰ Gnechi No. 1, Pl. V. 9.

This medallion is approximately of the same weight as the unique piece now described (20.25 grm.). This is itself somewhat low for the equivalent of 5 *solidi* of about 4.4 grm.⁵¹—the mean weight of good specimens of which would amount to 21.95 grm.⁵² But it seems impossible to separate the scale of the latter from that of the two other gold medallions above described which, except for the appearance of the Augustan title and some minor variations, are clearly intended to represent pieces of the same value. The weight of these has been shown to be respectively 21.35 and 21.41 grm.

In the case of a medallion of Constans weighing 41.04 grm., Seeck indeed has suggested⁵³ that it represented a piece of "9 *solidi*"—but that Constantius should have issued two otherwise parallel types, one of 4½ *solidi* answering to the alleged equivalency of the medallion of Constans and another of 5, consisting of real *quinios* is altogether inadmissible.

From what has been already said, we must conclude then that, already before May 1, 305, when Constantius Chlorus assumed the title of Augustus, larger gold pieces were being issued from the Treves and Siscia mints on the *solidus* scale.

These medallions are indeed inseparable from a series of others struck during the ensuing period when the *solidus* was the generally recognized unit, and

⁵¹ This is Missong's estimate of the mean weight of well-preserved *solidi* of Constantine I (*Z. f. N.*, vii, p. 294).

⁵² The proper legal weight of a *solidus* is 4.5 grm., but a specimen of Constantine I in my collection scales as low as 4.2 grm.

⁵³ *Z. f. N.*, xxi, p. 57.

weighing round about 20 grm.,⁵⁴ together with their doubles—clearly *denios*⁵⁵—of about 40 grm.

It is common knowledge, indeed, among numismatists that *aurei* at 60 to a pound continued to be struck throughout the empire for some years after this date. At Treves itself they were still issued down to 309.⁵⁶ The general introduction of the new *solidus* standard was not, indeed, effected till the date of Constantine's fourth Consulate in 315. But the evidence before us tends to show that already before his accession to the Augustan title he had inherited from his father a financial policy entailing what was practically a reversion to Diocletian's original system of 70 gold pieces to the pound, with a normal weight of 4.68 grm., though the amount was now fixed at 72, giving a normal weight of 45.5 grm.,⁵⁷ practically the standard of Carausius and Allectus.

The evidence of the medallions of Constantius Chlorus answering to this new standard goes, in fact, to confirm some observations long since made by O. Seeck as to its employment by that emperor.⁵⁸ Highly important in this connexion is a *solidus* in the

⁵⁴ e.g. Gneecchi: Constantine the Great, No. 37, 20.060 grm. (with loop) and 21.350 (with loop); No. 45, 19.200; No. 64, 19.950 and 20.060. Constans, No. 9, 19.130. Constantius II, No. 22, 19.320, 20.150, 19.840; No. 33, 20.210; No. 38, 20.000.

⁵⁵ e.g. Gneecchi: Constantine I, No. 46, 40.500 grm. Constans, No. 10, 38.750; No. 12, 41.020.

⁵⁶ Jules Maurice, *Numismatique Constantinienne*, i, p. 389 (*L'Atelier monétaire de Trèves*), ii, pp. 231, 232 (*L'Atelier monétaire de Tarragone: sic*).

⁵⁷ For Constantine's reform see Cod. Theodos. xii. 6, 13; 7, 1, and cf. O. Seeck, *Die Münzpolitik Diocletians und seiner Nachfolger*, *Z. f. N.*, xvii, p. 46.

⁵⁸ *Op. cit.*, pp. 47 seqq.

old Pembroke Collection,⁵⁹ recording his British expedition of A.D. 306:

Obv. CONSTANTIVS P. F. AVG. Laureate head r.

Rev. VICT CONSTANT AVG Victory marching left holding wreath and palm, at her feet two captives. In ex. S·M·T. Wt. 4.39 grm.

Of great interest, too, is the fact that a gold memorial piece struck on the death of Constantius at York in 306 answers to the same standard.

Obv. DIVVS CONSTANTIVS. Bust of Constantius to right with bare head.

Rev. CONSECRATIO The emperor as Sol with raised right hand and whip in left, in a two-horse car above pyre. In ex. PTR. Wt. 4.50 grm.⁶⁰

A half *solidus* struck by Constantine the Great as Caesar with the reverse inscription PRINCIPI IVVENTVTIS is also of considerable importance in this connexion as fitting on to the *solidus* of the corresponding *denio* above described, struck after he had assumed the title of Augustus. A specimen of this type weighs 2.27 grm.⁶¹

⁵⁹ *Numismata Antiqua*, collegit &c. Thomas Pembrockiae et Montis Gomorici Comes (1746), Pl. XXIV. 67; Catalogue of the Pembroke Coll., London, 1848 (cited by Seeck, *loc. cit.*), p. 207.

⁶⁰ Maurice, *Num. Const.*, i, Pl. XXII. 8, and p. 383, from the Gotha Cabinet. Maurice very inadequately remarks, "Ce poids est anormal, pourtant la pièce semble authentique". Another example, from the de Quelen collection, is cited by Cohen (No. 28) without indication of weight. Another is described by Seeck (*loc. cit.*, p. 47) from the Trau collection. It was badly preserved and weighed 3.98 grm. No trace of mint-mark seems to have been visible, and Seeck describes it as "wahrscheinlich, gleich nach dem Tode des Constantius, in London geschlagen".

⁶¹ Seeck, *op. cit.*, p. 47.

Monsieur Jules Maurice, who maintained that the *solidus* was introduced by Constantine in 309, was inclined to make an exception of the following specimen.

Obv. CONSTANTINVS PF AVG Laureate head to right.

Rev. FELICITAS REIPVBLICAE Constantine in military uniform seated on platform to left; behind him to left the Praetorian Prefect, and to right at the foot of the platform a soldier holding two spears, before whom are two suppliants. In ex. PTR. Wt. 4.92 grm. (Cabinet of Vienna.)

Maurice observes that the obverse head is that of Constantius Chlorus,⁶² which, as he allows, favours the supposition that the coin may refer to the successful expedition of Constantine against the Franks and Alemanni at the very beginning of his reign in 306. He cites a variety in the Copenhagen Cabinet weighing 4.50 grm.

Seeck cites a *solidus* of Maxentius struck in the period shortly after his assumption of the Augustan title, 306-307⁶³ (at Ticinum-Pavia) with the reverse inscription HERCVLI COMITI AVGG NN and SMT in the exergue, weighing 4.44 grm. It is noteworthy that the coin was struck at a time when Maxentius was on good terms with Constantine. After his quarrel, he reverted to the older *aureus* standard of 60 to a pound.

⁶² *op. cit.*, p. 391. Maurice adds, however, very unconvincingly, "mais peut-être cette pièce a-t-elle été frappée plus tard après les victoires de Constantin en 310 ou en 313".

⁶³ *op. cit.*, p. 48. Seeck (writing in 1890) interprets the mint-mark as referring to Tarraco.

There can indeed be no question that even at Treves itself as at Ticinum (Pavia) and Siscia, where we also have evidence of the early appearance of the *solidus* system, the older standard still prevailed for some years. Apart from the weights of the gold pieces themselves, this is made evident in a series of mints which still issued *aurei* bearing the 60 mark, Ξ . As Missong has shown in his elaborate article,⁶⁴ this mark still continued to appear till A.D. 312. It is only found in coins of the Eastern mints, Nicomedia and Antioch, where it is most plentiful, at Serdica and Thessalonica and, sporadically, at Rome. It seems, as Missong points out, to have a special relation to a local standard of Nicomedia, and in any case its appearance marks a stage in Diocletian's attempt at the artificial appreciation of the gold value of a pound of silver. This reached its climax in the Edict on prices issued in 301 when the value of the pound was fixed as 50,000 *denarii* which, as Seeck points out,⁶⁵ seems to imply a relation of 1,000 *denarii* to an *aureus*, and that the *aurei* themselves were to be reckoned at 50 to the pound. He is able to cite a series of *aurei* of Diocletian, Maximian, Constantius Chlorus and Galerius, ranging in weight from 6.32 to 6.71 grm. which he refers to this standard.

The experiment in any case was short-lived and in 303 the Ξ appears again on the coinage.

But in Britain the old standard of 70 to the pound fixed by Diocletian when he first restored to order the hitherto anarchic conditions of the currency, was

⁶⁴ *Die Vorläufer der Werthzahl OB auf römischen Goldmünzen*, Z. f. N., vii, 1880, pp. 241 seqq.

⁶⁵ *op. cit.*, p. 45, and cf. p. 44.

taken over by Carausius, who set up his independent rule in A.D. 287.⁶⁶ This system was maintained by Allectus who slew him in 293. The average weight in grammes of four finely preserved gold coins of Carausius of which records are before me is 4.370 grm., of eight of Allectus it is 4.39.⁶⁷ Two gold pieces of Carausius, struck in the name of Maximian, average 4.3 grm.⁶⁸ The average of 13 pieces of Diocletian marked O (70 to the pound) is 4.51 grm., somewhat below the legal standard of 4.678 grammes, but as might be expected, slightly higher than the British coins, which average 4.38 grm., a weight that curiously anticipates the *solidus* standard of 72 to the pound.

The British standard is in fact practically identical with that of the later *solidus* of about 4.5 grm. It was this system which Constantius found deeply rooted in business affairs of Britain at the time of his re-conquest in 296. Not to speak of his general aim of conciliating the provincials, surveying the world from London or York he could not but be conscious of the advantage in exchange which the existing monetary

⁶⁶ J. Evans, *N. C.*, 1886, p. 273 (PAX AVG) 4.5 grm. (69½ grs.); *ibid.* (MVLX X) 4.52 grm.; J. E., *N. C.*, 1902, p. 359 (PAX AVG—VOT V) 4.146 grm.; B. M. (CONSERVAT AVG) 4.31 grm.; (CONSERVATORI AVGGG) 4.27 grm. All London mint.

⁶⁷ J. E., *N. S.*, 1886, p. 278 (COMES AVG) 4.44 grm.; *ibid.* (COMES AVG) 4.341 grm.; B. M. (ORIENS AVG) 4.45 grm.; (PAX AVG) 4.56 grm.; (SALVS AVG) 4.3 grm.; (SALVS AVG) 4.71 grm.; Ashmolean Museum (PAX AVG) 4.39 grm. All London mint. The average weight of the gold coins of Carausius as given by Mr. Percy H. Webb (*Num. Chron.*, 1907, p. 41) is 66.8 grs. or about 4.3 grm.

⁶⁸ Webb, *loc. cit.*, p. 43 (66.1 and 66.5 grm. respectively).

usage of Britain gave in relation to the artificial system of Diocletian. To melt down the gold hoards of the British usurpers and to re-issue them in a diminished number of *aurei* was in itself not an attractive financial operation. As a matter of fact, *aurei* on the British Standard, struck in London by Carausius in the name of his "brothers", were included in the Arras hoard.^{68a} The evidence above referred to renders it clear that Constantius had already set about the introduction of the practically identical arrangement based on a *solidus* of 72 to the pound. Of the importance to which Londinium as a great commercial centre had risen among Roman cities the great Arras medallion of Constantius is the most splendid existing monument. His monetary reforms go far to show that the London exchange for the first time exercised a predominant influence in the outside world. The old system could not of course be overthrown in a day,⁶⁹ but the partial mintage of *solidi* at Treves and elsewhere and the coining of *multipla* for sportulary or commemorative purposes based on this unit was really the thin end of the wedge. It remained for his son to drive in the wedge still further.

The concurrent issue, however partial, of gold pieces—some of them of much the same sizes—based on two different standards must necessarily have caused some confusion. Curiously enough, however, an exactly parallel case is noticeable in the bronze

^{68a} I learn that two such pieces were acquired by Mr. E. T. Newell.

⁶⁹ Pieces of the old *aureus* weight were in fact occasionally struck by Constantine II (Dattari 3, wt. 5.120 grm., Treves); Constans (*ibid.* 15, wt. 5.380 grm., Aquileia); and Valentinian II (*ibid.*, wt. 5.3 grm., COM). Not "medallions", as Dattari, *loc. cit.*

pieces issued from the Treves mint at this period.⁷⁰ The *folles* belong to two different systems, one series, weighing about 5.25 grm., and having a module of c. 24 mm., the other of about 4.5 grammes and with a diameter of c. 22 mm. The parallelism, it will be seen, extends even to the respective weights, and it was the lighter class, which would harmonize better with the *solidus*, that Constantine finally established throughout his dominions. So far as the gold issues were concerned, since gold still passed legally by weight, the difficulty might no doubt be overcome. But there also seems to have been a practical device for obviating the difficulty which consisted in the issue of small coins with common denominations.

7. *Multipla based on Smaller Units than the Aureus.*

In addition to the gold medallions cited above, answering to the *aureus* system of 60 to the pound, and themselves representing multiples of these—such as *binios* equivalent to 2, *quinios* to 5 or *denios* to 10 *aurei*,—there occur other pieces that do not fit in to this regular scale. Besides *denios* of 53–54 grm. or *quinios* of 26–27 grm., we find a recurring denomination equivalent to about 13 grm. This is half that of the *quinio*⁷¹ and undoubtedly represents $2\frac{1}{2}$ such *aurei*.

That a popular denomination should be calculated

⁷⁰ Maurice, *op. cit.*, i, pp. 396, 397.

⁷¹ e.g. Diocletian (CONSVL VI) Gneecchi 2, Cohen No. 50, 13.8 grm.; Gn. 8, Cohen No. 472 (VICTORIA AVG) 13.10 grm.; Gneecchi 7 (PERPETVA FELICITAS) 12.91 grm. Constantius Chlorus as Caesar: Gn. 2 (HERCVLI CONS CAES—SMA) 13.375 grm. Do. Gn. 3 (PRINCIPI IVVENTVTIS PRON) 12.975 grm.

in odd numbers is difficult to understand, and we may conclude that the unit of reckoning in these cases would have been a coin answering to a half *aureus*—a *semis* or *semissis*, the $2\frac{1}{2}$ pieces representing 5 of these.



FIG. 4.

Small pieces are naturally more liable to escape notice and are proportionately rarer, but it is still remarkable that actual specimens of gold *semisses* answering to the 60 to the pound scale are by no means frequent. In his list of the coins of Maximianus Herculus, for instance, Cohen only cites two varieties of what he calls gold "quinarii".⁷² I possess a unique gold *semissis* of this class struck by Constantius Chlorus as Caesar at Siscia (Fig. 4).⁷³

Obv. CONSTANTIVS NOB CAES Laureate bust to r.

Rev. ORIENS AVGVSTOR Sol Oriens standing, raising right hand as if receiving adoration and holding whip in left. He wears a mantle. In ex. SIS.
Wt. 2.7 grm.

⁷² No. 130 in the Vienna Cabinet; note the quite exceptional inscription CAVDETE ROMANI (A.D. 306) and No. 358 (IOVI CONSERVAT AVGG).

⁷³ A *solidus* of this type with the legends CONSTANTIVS NOB C and ORIENS AVG was in the *Ancien Catalogue* of France (Coh. 209).

On the other hand, during the *solidus* period, though the gold *semissis* is much better represented, the $2\frac{1}{2}$ multiple piece disappears,⁷⁴ and is replaced by one of $1\frac{1}{2}$. A piece with an average weight of 6.6 grm. is of constant occurrence throughout the reign of Constantine and his sons,⁷⁵ together with its double of about 13.250 grm., clearly the *trinio* of the ordinary *solidus*. It is important moreover to observe that, as in the case of the *quinios* of about 20.000 grm. from the Arras find, this *trinio* system based on the *solidus* begins with Constantius Chlorus.⁷⁶

The *semis* of a *solidus* of this emperor does not seem to be authenticated, but will probably be found to exist. Of Constantine the Great as Augustus two variations of *semisses* belonging to the *solidus* system exist in the British Museum collection, one with the reverse legend **PONT MAX TRIB PPP PROCS**,⁷⁷ weighing 2.22 grm., and another with **VBIQVE VICTORES** of the same weight. In Cohen's list gold *quinarii* of Constantine are mentioned with the reverse inscriptions **VICTORIA CONSTANTINI AVG. VOT XXX**⁷⁸ and **VICTORIA DD NN AVGG**.⁷⁹ Similar pieces also occur of Crispus, Constantius II, Constantius

⁷⁴ Its weight should be 11.250 grm. The gold medallion (Gnecchi, Constantine I, 47) of 11.445 grm. is very badly preserved and doubtless represents one of the regular *trinos* of about 13.250 grm.

⁷⁵ See Gnecchi, *Medaglioni Romani*, vol. i, Oro.

⁷⁶ e.g. Gnecchi, *op. cit.*, p. 13. Constantius Chlorus No. 2 (**HERCVLI CONS CAES—SMA**), wt. 13.275 grm., and No. 3 (**PRINCIPI IVVENTVTIS—PRON**), wt. 12.975 grm.

⁷⁷ Cf. Cohen No. 403. Rev. **PONT MAX TRIB PPP PRO COS—TR** *quinarius*. Of A. D. 310.

⁷⁸ Cohen Nos. 607 and 613.

⁷⁹ *ibid.*, No. 621.

Gallus, and of Licinius Caesar. They continue to be issued intermittently during the succeeding period to Theodosius,⁸⁰ and reappear under the Byzantine dominion⁸¹ from Anastasius onwards down to about the middle of the ninth century.

The two and a half relation to the *solidus* which has been seen to have existed in the case of the half *quinios* of about 13 grm. struck under the 60 to a pound system was once more invoked in the case of the *solidus* itself. From Constantine's time onwards we constantly encounter a small gold piece two and a half of which, during the early period of its existence, almost exactly made up the normal weight of a *solidus*.

The average weight of ten specimens of these belonging to the Constantinian period is 1.76 grm., ranging from 1.62 to 1.90 grm.⁸² These pieces, which

⁸⁰ *Cat. of Byzantine Coins in the British Museum* (Warwick Wroth), *passim*. The weight of the Byzantine *semissis* is there given (vol. i, p. lxxvi) as 2.202 grm. (34 grs.) to 2.267 grm. (35 grs.). The average weight from many examples belonging to the period from Constantine to Anastasius is stated by Vasquez Queipo to be 2.237 grm.—the theoretical weight being 2.257 grm. (*op. cit.*, vol. iii, p. 501).

⁸¹ Specimens exist in the British Museum of gold *semisses* of Julian (wt. 2.27 grm.), Valentinian I (2.05 grm.), Valens (2.18 grm.), Theodosius I (2.19 grm.).

⁸² Constantine I (AVG PRINCIPI IVVENTVTIS), 1.80 grm.; Licinius I (AVG IOVI CONSERVATORI AVGG), 1.70 grm.; (AVG PRINCIPI IVVENTVTIS—Ostia: *solidi* also struck), 1.90 grm.; Crispus (VBIQVE VIC TORES NK.): 1.80 grm.; Constantius II (CAES PRINCIPI IVVENTVTIS), 1.62 grm.; *ibid.* (AVG VICTORIA AVGVSTORVM—AN), 1.64 grm.; another (VOT XXX—KONS), 1.9 grm.; *ibid.* (SIC X SIC XX—Siscia), 1.70 grm.; *ibid.* (VOT XXXX—Sirmium), 1.87 grm.; *ibid.* (VOT XXX—Antioch), 1.90 grm. These, except the first, are all in

may be roughly taken to weigh 1.80 grm., and which represent exactly two-fifths of a *solidus* of 4.50 grm., though they thus stand in relation to that standard, must be regarded as primarily representing the third of the *aureus* of 5.40 grm. still current throughout the



FIG. 5.

earlier part of the Constantinian period. They are in fact *trientes* or *tremisses* of that system.

An interesting specimen of one of these in my own collection (Fig. 5)⁸³ struck under Constantine the Great shows the same reverse type as his large medalion or *denio* from the Arras hoard referred to above, as well as to corresponding types of *solidus* and *solidus* and a half also represented in the find.⁸⁴ Its obverse type brings it into other relations:

Obv. IMP CONSTANTINVS P F AVG Bust of Constantine to left wearing seven-rayed crown.

Rev. PRINCIPI IVVENTVTIS Standing figure of the emperor, laureate, in full military uniform with mantle, holding spear transversally in his right hand and orb in his left. In ex. T R. Wt. 1.80 grm.

That this piece belongs to a time when *solidi* had begun to be struck is made probable by the occurrence

the British Museum series, in investigating which I have had the valuable assistance of Mr. Harold Mattingly.

⁸³ From Kauffman sale, 1929.

⁸⁴ A. Baldwin, *op. cit.*, p. 5, Fig. 2.

of a *binio* of the *solidus* series weighing 8.91 grm., and of which the present coin may be regarded as a fifth, presenting a bust with a head wearing a similar rayed crown.⁸⁵

The rayed head, though never frequent on Constantine's coinage, is found already on one of his Caesarean bronze pieces, and recurs on his gold coins at intervals to an advanced period of his reign. A signal instance of this feature is supplied indeed by the celebrated *binio* or double *solidus* showing the gate of Treves and the bridge over the Mosel. A certain indication that this and the related *multipla* belong to an early date in the Augustan period of Constantine's reign is, however, given by the reverse type and the inscription **PRINCIPI IVVENTVTIS**, which are both taken over from his coinage when still Caesar. As has been already demonstrated, all the gold denominations on which the same type and inscription recur belong to the *solidus* system. A half *solidus* of this class actually exists, weighing 2.27 grm., on which Constantine still bears the title of Caesar.⁸⁶

These *trientes* of the Constantinian Age begin at a time when, as has been shown above, there is evidence of the existence of a dual currency in his dominions based on the old 60 to the pound standard of Diocletian, and what we may perhaps call the "Constantian" standard of the *solidus* on the other. The fact there-

⁸⁵ Cohen No. 391. *Obv.* Radiated bust of Constantine draped and cuirassed, raising his right hand and holding orb in his left. *Rev.* **PIETAS AVGVSTI N** Constantine raising a female figure with a mural crown and himself crowned by Victory. In ex. **SMN** (Nicomedia).

⁸⁶ Seeck, *op. cit.*, p. 47.

fore that these small gold pieces had formed a definite fraction of the new unit and were indeed exactly a fifth of the binio or two-*solidus* piece as well as being thirds of the current *aurei* gave a special utility to this issue.

But they raise at once an interesting question. The *semisses* or *trientes* of the latest days of the Roman Empire in the West, and surviving so long at Byzantium, which were copied in the dominions of Goths, Lombards and Vandals, Burgundians and Franks, and finally passed into Saxon Britain, are clearly based on the *solidus*. They were, as their later name implies, *tiers de sou*.

Had these any direct connexion with the present series based on the *aureus*?

The evidence that they were in fact the outgrowth of these earlier issues is continuous and clear. From A. D. 315 when the *solidus* system first became general throughout the Empire the special utility of these gold *tremisses* as linking the two systems disappeared. There would be a natural tendency to regard them not as two-fifths of the *solidus* but as one-third of it. There is visible, at any rate in the latter half of the fourth century, a tendency to reduce the weight of these coins so as to bring them into this convenient relation.

Taking the average of twenty-five of these pieces belonging to the age of Theodosius and his sons,⁸⁷ it amounts to 1.48 gms., answering to a third of the *solidus* of 4.44 grm.—a fair mean weight in that period.

⁸⁷ Fifteen of these are well-preserved specimens in the British Museum. The remaining ten are from the Madrid Museum, as noted by Vasquez Queipo, *Essai sur les systèmes métriques et monétaires*, &c., iii, p. 486.

For the intermediate period from Julian to Gratian moreover, the average of twelve coins works out at 1.64 grm., showing that there was a gradual transition from the Constantinian standard of about 1.80 grm.⁸⁸ There is no break in continuity.

8. Aurei from the Arras Hoard.

Owing to the interest excited by the find there has been a tendency to ascribe to it, without any warrant, a number of gold pieces that have come to light in recent years. Thus, as Miss Baldwin has pointed out,⁸⁹ a whole series of later Constantinian pieces dating from A.D. 313 onwards, were described in the Ratto Catalogue of 1923 as having belonged to the hoard which according to the testimony of those who had an opportunity of examining it were not contained in it.

Happily the coins that actually came out of the clay-pit at Beaurains-lez-Arras are in nearly all cases distinguished by silverish patches on their surface, probably due to the chemical action of the aluminium in the brick earth.⁹⁰ So much is this the case that in the supplementary list of the specimens given here, I have regarded this as an "acid test", and have therefore excluded all specimens in which some traces of this silvering are not to be found.

The coins in my possession are nearly all in very fine condition, and mostly belong to that well-known somewhat dumpy class of exceptionally small module

⁸⁸ Of these five are from the British Museum and six from Valdez Queipo, *op. cit.*

⁸⁹ *op. cit.*, pp. 7, 8.

⁹⁰ *ibid.*, p. 4.

that were in vogue at the very beginning of the third century of our era. Thanks to the courtesy of the Keeper of the Coin Department, and the kind help of Mr. Harold Mattingly, I am able to incorporate with my own in the following list a series of specimens of *aurei* from the Arras hoard acquired by the British Museum. Among earlier specimens may be briefly mentioned :

DIOCLETIAN.

1. *Obv.* IMP CC VAL DIOCLETIANVS AVG

Rev. VICTORIA AVG Victory holding crown and wreath. Wt. 4.84 grm. (belonging to Diocletian's early issue of *aurei* at 70 to the lb. A. D. 284-285). A. E. As Cohen No. 465.

2. *Obv.* Same.

Rev. FATIS VICTRICIBVS Usual type. In ex. SC (Siscian mint). Wt. 5.3 grm. Early piece of 60 to lb. standard. A. E.

MAXIMIANUS HERCULIUS.

3. *Obv.* M AVR VAL MAXIMIANVS AVG: Radiate bust with cuirass ?

Rev. IOVI CONSERVATORI AVG Jupiter standing holding thunderbolt and spear. In ex. SMT (Ticinum). Somewhat worn. Wt. 4.74 grm.—possibly, therefore, belonging to the 70 to lb. standard. B.M.

4. *Obv.* MAXIMIANVS AVGVSTVS Laureate bust r.

Rev. HERCVLI VICTORI Hercules seated. In ex. P•R (Rome). Cohen 306. Wt. 5.2 grm. (poor condition). A. E.

Omitting, for special notice, four coins with heads of divinities, the following may be mentioned as belonging to the later group. These are either of the small module described or of types transitional to it.

DIOCLETIAN.

5. *Obv.* DIOCLETIANVS AVG Laureate head r.
Rev. COMES AVGG Mars with shield and spear beneath arch. In ex. TR. Well preserved. Wt. 4.91 grm. B.M. Not in Cohen. [Pl. XVII. 1.]
6. *Obv.* DIOCLETIANVS P AVG Laureate head r.
Rev. CONSERVATORES AVGG ET CAESS NN Hercules with club and lion's skin holding out hand to Jupiter who holds a sceptre and Victory on a globe. In ex. P TR. Wt. 5.4 grm. (60 to lb. standard). A. E. Not in Cohen. A characteristic example of the small module. [Pl. XVII. 9.] The reverse bears an obvious allusion to the good understanding between Iovius and Herculus.
7. *Obv.* DIOCLETIANVS AVG Laureate head r.
Rev. VIRTVS AVGG NN Emperor seated, holding spear, crowned by Victory standing behind. At his feet a captive. [Pl. XVII. 2.] Wt. 5.42 grm., transitional module. A. E. Not in Cohen.
8. *Obv.* DIOCLETIANVS P F AVG Same head.
Rev. VOT XX AVGG in wreath. Wt. 5.4 grm.. Small module, the head being in exceptionally high relief. A. E. Compare Cohen No. 540, VOT XX AVGGG. Diocletian celebrated his *Vicennalia* in Rome in 303. [Pl. XVII. 3.]

MAXIMIANUS HERCULIUS.

9. *Obv.* MAXIMIANVS P F AVG Laureate head r.
Rev. HERCVLI CONSERVATORI AVGG ET CAESS NN Hercules with lion's skin standing left with right hand resting on club and left holding club. The quiver is visible above his right shoulder. In ex. TR. Brilliant condition. Wt. 5.27 grm. B.M. Not in Cohen. [Pl. XVII. 4.]

10. *Obv.* MAXIMIANVS P AVG Same head.

Rev. HERCVLI DEBELLAT Hercules standing striking Hydra with his club. In ex. P T (Ticinum). Brilliant condition. Wt. 5.42 grm. B.M. [Pl. XVII. 5.] Cohen No. 253, figured.

11. *Obv.* Same.

Rev. HERCVLI PACIFERO Hercules holding club and flowering branch. In ex. PR. Fair preservation. Wt. 5.43 grm. B.M. Cohen No. 271.

12. *Obv.* MAXIMIANVS AVG Same head.

Rev. IOVI CONSERVATORI Jupiter seated holding sceptre and thunderbolt. Eagle at feet holding wreath in beak. In ex. PTR. Good preservation. Wt. 4.98 grm. B.M. [Pl. XVII. 6.] Cohen No. 367 with P R in ex., *Ancien Catalogue*.

13. *Obv.* MAXIMIANVS P AVG Laureate head l.

Rev. IOVI FVLGERATORI Jupiter hurling thunderbolt at giant. In ex. P TR. Wt. 5.4 grm. A. E. Small module: fairly preserved (cf. Cohen 376).

14. *Obv.* Same.

Rev. VOT XX SIC XXX in wreath. No mint-mark. In mint condition. Wt. 5.24 (5.53 and 5.63 grm.) B.M. Cohen No. 689; "M. Rollin" [Pl. XVII. 7] (three examples).

Maximian celebrated his *Vicennalia* at the same time as those of Diocletian in 303 (cf. No. 33 below with the legend VOT XX AVGG NN).

15. *Obv.* Same. (a) P F AVG; (b) AVG

Rev. PACATOIRES GENTIVM Maximian in chariot holding flowering olive-branch. Foot soldier to left of horses. In ex. TR; (a) A. E., fair condition, wt. 5.1 grm.; (b) B. M., brilliant condition, wt. 5.07 grm. Transitional module. Compare Cohen No. 424 (P F AVG). [Pl. XVII. 8.]

16. *Obv.* Same.

Rev. Emperor on horseback, galloping, and holding lance pointed downwards; below transport galley with four helmeted soldiers with indication of water (the Thames) below. Adaptation from "London medallion" where, however, the lance of Constantius is directed upwards (cf. above, p. 228). A. E. In mint condition.

17. *Obv.* Same.

Rev. VIRTVS MILITVM Gate of camp. In ex. TR. Well preserved. Wt. 5.11 grm. Small module with high relief. A. E. Cohen No. 616.

CONSTANTIUS CHLORUS AS CAESAR.

18. *Obv.* CONSTANTIVS NOB C Laureate head r.

Rev. CONSERVATORES AVGG ET CAESS NN Jupiter holding sceptre and Victory on globe greeting Hercules holding club and lion's skin. In ex. P TR. Small module (4). In mint condition. A. E. Wt. 5.1 grm. [Pl. XVII. 9.] Same type, B.M., also mint condition. Wt. 5.31 grm. Not in Cohen, but compare Diocletian No. 6.

19. *Obv.* CONSTANTIVS NOB C Laureate head r.

Rev. FIDES MILITVM Holds two standards. No mint-mark. Module $4\frac{1}{2}$. Finely preserved. A. E. Wt. 5.4 grm. Not in Cohen.

20. *Obv.* Same.

Rev. HERCVLI AVGG Hercules standing resting on club and wearing lion's skin. In ex. TR. Fair preservation. Wt. 5.43 grm. Module $4\frac{1}{2}$. B.M. Not in Cohen.

21. *Obv.* Same.

Rev. HERCVLI CONSER AVGG ET CAESS NN

Hercules in lion's skin standing left resting on club and holding bow. Quiver visible above right shoulder. In ex. TR (cf. Maximianus Hercules No. 9). In mint condition. Wt. 4.85 grm. Dumpy module with head in high relief. B.M. Compare Cohen No. 146, Constantius AVG.

22. *Obv.* Same.

Rev. MARTI PROPVGNATORI Mars advancing r.

holding spear and shield. In ex. TR. Two specimens, finely preserved. A. E. Wt. 5.3 grm. B.M. Wt. 5.22 grm. [PL XVII. 10.] Transitional module, $4\frac{1}{2}$. Cohen No. 168.

23. *Obv.* Same.

Rev. IOVI CONSERVATORI Jupiter seated with

eagle at feet, as Maximian No. 12. In ex. P T (Ticinum). Fair condition. Wt. 5.01 grm. B.M.

24. *Obv.* Same.

Rev. PIETAS AVGG Pietas holding infant and with

a child on either side. In ex. P T R. Module $4\frac{1}{2}$. Well preserved but of somewhat coarse fabric. Wt. 5 grm. A. E. Another example, in B.M., fine. Wt. 5.39 grm. Same transitional module. Cohen No. 215.



FIG. 6.

25. *Obv.* Same.

Rev. PAX AETERNA Pax standing l. holding flowering olive-branch and transversal sceptre. In ex. TR. Obverse in mint state, reverse apparently

from worn die. Wt. 5.55 grm. A. E. Not in Cohen. The reverse type, which is unknown to Galerius, Maximin, and Constantine and his colleagues, occurs in a variant form, with the same inscription but Pax either running or marching left, on *aurei* of Diocletian's and Maximian's earlier class, sometimes marked O as belonging to the 70 to a lb. series. It looks as if an old die had been used for striking the reverse of this piece. (Fig. 6.)

26. *Obv.* CONSTANTIVS NOB C Laureate head r.

Rev. PIETAS AVGG ET CAESS NN Pietas with child at breast and another by her side. In ex. TR. Small module (4). Mint condition. Wt. 5.7 grm. A. E. Cohen 217; Denmark. [Pl. XVII. 11.]

27. *Obv.* FL VAL CONSTANTIVS NOB CAES Laureate head r.

Rev. PROVIDENTIA DEORVM Providence seated holding wand with orb at feet. Fair condition. Wt. 5.45 grm. B.M. Not in Cohen.

This piece dates from shortly after Constantius's nomination as Caesar by Maximian in 292.

28. *Obv.* CONSTANTIVS NOB C Laureate head r.

Rev. VIRTVS HERCVLI CAESARIS Emperor on horseback with lance, mantle flowing behind him. In ex. TR. Small module (4); well preserved. Wt. 5.3 grm. A. E. Cohen 306. [Pl. XVII. 12.]

CONSTANTIUS CHLORUS AS AUGUSTUS.

29. *Obv.* CONSTANTIVS PF AVG Laureate head r.

Rev. HERCVLI CONSERVATORI AVGG ET CAESS NN Same type as Maximian No. 9. In ex. TR. Mint state. Wt. 5.18 grm. Small module with head in high relief. B.M. Not in Cohen.

GALERIUS MAXIMIANUS AS CAESAR.

30. *Obv.* MAXIMIANVS NOB C Laureate head r.
Rev. IOVI CONSERVATORI AVGG ET CAESS
 NN Jupiter seated to left, holding thunderbolt.
 In ex. TR. Brilliant condition. Wt. 5.4 grm.
 Small module (4). A. E. Another similar, fine
 condition, B.M. Wt. 5.34 grm. [PL XVII. 13.]
 Cohen No. 121, *Ancien Catalogue*.

31. *Obv.* MAXIMIANVS CAES Laureate head r.
Rev. FELIX ADVENT AVGG NN Africa standing
 coifed in elephant's mask, holding banner and
 tusks. At her feet lion devouring bull's head. In
 ex. PK (Carthage). Wt. 5.1 gm. [PL XVII. 14.]
 Small module (4). Well preserved. A. E. Not in
 Cohen, but similar types are given by him in silver
 and bronze, Nos. 26-9. An *aureus* of this type is
 known of Diocletian (Cohen 66).⁹¹

The Augusti here are Diocletian and Maximianus; this *aureus* was therefore struck before 305.

32. *Obv.* MAXIMIANVS NOB C Laureate bust r.
Rev. SIC X SIC XX COS IIII in wreath. Good
 condition. Wt. 5.0 grm. B.M. Not in Cohen.
 This coin dates from 302 when Galerius and
 Constantius Chlorus were joint Consuls for the
 fourth time.⁹² [PL XVIII. 1.]

33. *Obv.* Same.
Rev. VOT XX AVGG NN in wreath. Small dumpy
 module (4). Mint state. Wt. 5.03 grm. B.M.
 [PL XVIII. 2.] Not in Cohen.

Struck on the occasion of the *Vicennalia* of
 Diocletian and Maximian, Nov. 20, 303.⁹³

⁹¹ A silver piece of Maximianus Hercules (weight 1.8 grm.) in my possession, said to have come from the Hoard, bears a similar reverse type and legend. In the exergue is a character like a reversed S.

⁹² Idatius in *Fastis*: "Constantio IV et Maximiano IV".

⁹³ Cf. Clinton, *Fasti Romani*, i, p. 346, and *Appendix, Diocletian*.

34. *Obv.* MAXIMIANVS CAES Laureate head r. (in high relief).

Rev. VIRTVS MILITVM Camp gate: as Diocletian No. 7. In ex. P R. Good condition. Wt. 5.66 grm. B.M. Cohen No. 221.

GALERIUS AS AUGUSTUS.

35. *Obv.* MAXIMIANVS PF AVG Laureate head of Galerius r.

Rev. CONCORDIA AVGG ET CAESS NN Concordia seated holding two cornucopias. In ex. TR. Mint state. Wt. 5.70 grm. B.M. Not in Cohen. [Pl. XVIII. 3.]

36. *Obv.* Same.

Rev. VBIQVE VICTORES Emperor with transversal spear between two captives. In ex. TR. Two specimens, both in mint state. A. E. Wt. 5.85 grm.; B.M. Wt. 5.46 grm. Small module with high relief. Not in Cohen. [Pl. XVIII. 4.]

SEVERUS II AS CAESAR.

37. *Obv.* SEVERVS NOB CAES Laureate head r.

Rev. SOLI INVICTO CONSERVAT AVGG ET CAESS NN Sol Invictus radiate, standing, holding orb and raising right hand. In ex. TR. Mint state. Wt. 5.55 grm. B.M. [Pl. XVIII. 5.] Compare Cohen No. 65 (S. wears rayed crown). Severus was made Caesar by Diocletian with Maximinus Daza on his abdication in 305. On Constantius Chlorus's death in 306, Severus took the title of Augustus.

MAXIMINUS DAZA AS CAESAR.

38. *Obv.* MAXIMINVS NOB C Laureate head r.

Rev. IOVI CONSERVATORI AVGG ET CAESS NN Jupiter standing, holding spear and thunderbolt. In ex. TR. Good condition. Wt. 5.4 grm. B.M. Cohen No. 128 (MAXIMINVS NOBIL C).

39. *Obv.* Same.

Rev. SOLI INVICTO CONSERVAT AVGG ET CAESS NN Sol Invictus, as Severus II, No. 35. In ex. TR. Mint state. Wt. 5.13 grm. Dumpy module. B.M. [PL XVIII. 6.] Cohen No. 177.

MAXENTIUS.

40. *Obv.* MAXENTIVS PRINC Laureate head r.

Rev. HERCVLI COMITI AVGG ET CAESS NN Hercules standing, clad in lion's skin, holding bow and resting right hand on club. Quiver visible above r. shoulder. In ex. TR, in field E. Good condition. Wt. 5.43 grm. B.M. [PL XVIII. 7.] Compare Cohen No. 80 (MAXENTIVS PRINC INVICT-PR).

This coin with the title of *Princeps* belongs to the time immediately succeeding the date of his accession in Nov. 306.⁵⁴

CONSTANTINE I AS CAESAR.

41. *Obv.* CONSTANTINVS NOB CAES Laureate head r

Rev. PRINCIPI IVVENTVTIS Standing figure of emperor holding standard and spear. In field E and ? 3. In ex. PR. Module (4). Fine condition. A. E. Wt. 5.5 grm. [PL XVIII. 8.] Var. of Cohen 405.⁵⁵

⁵⁴ A silver coin said to be from the Arras Hoard (*obv.* MAXENTIVS PF AVG Laureate head r.; *rev.* TEMPORVM FELICITAS AVG N Wolf and twins, weight 3.09 grm.) is in the British Museum. This may date from 307.

⁵⁵ Two small silver pieces (weight 1.79 and 1.70 grm.) of Constantine with the Augustan title are in the British Museum, stated to be from the Arras find (*rev.* VIRTVS MILITVM Camp Gate. PTR in ex.).

I have placed in a separate group five *aurei* in the finest mint condition presenting heads of Gods with the Treveran mint-mark TR in small letters below the necks. No. 43 is here added by the kindness of the authorities of the Coin Room of the British Museum. They are all of the characteristic compact small module.

42. *Obv.* DIOCLETIANVS AVG Laureate head r.

Rev. IOVI CONSERVATORI Laureate bust of Jupiter to r. with bare neck and shoulder. Beneath TR. A. E. *Fleur de coin*. Wt. 5.2 grm. Module (4), but flan slightly protrudes to right [Pl. XVIII. 9.] Cohen (No. 169) illustrates a specimen of this piece, "M. Dannenberg à Berlin", with a loop attached.

43. *Obv.* MAXIMIANVS P AVG Laureate head r.

Rev. HERCVLI CONSERVATORI Head of Hercules to r. with lion's skin tied round the neck. Below TR. Mint condition. Wt. 4.95 grm. Module (4). B.M. [Pl. XVIII. 10.] Not in Cohen.

44. *Obv.* MAXIMIANVS PF AVG Same head.

Rev. Same. Mint state. Wt. 5.27 grm. B.M. [Pl. XVIII. 11.]

45. *Obv.* CONSTANTIVS N C Laureate head r.

Rev. MARTI PROPVGNATORI Bust of Mars wearing crested helmet (showing ivy pattern), cuirass and mantle. Beneath his right shoulder TR. A. E. *Fleur de coin*. Module (4). Wt. 4.95 grm. [Pl. XVIII. 12.] Cohen publishes (No. 167) a parallel piece with the legend CONSTANTIVS AVG (*Ancien Catalogue*).

46. *Obv.* MAXIMIANVS N C Laureate head of Galerius r.

Rev. MARTI PROPVGNATORI Same type as last; beneath shoulder TR Brilliant condition. Module (4), but with a slight projection of flan. Wt. 5.3 grm. [Pl. XVIII. 13.] A. E. Not in Cohen.

47. *Obv.* MAXIMIANVS N C Laureate head of Galerius r. (as last).

Rev. SOLI INVICTO Rayed and draped bust of Sol Invictus to r. Below, TR. Wt. 5.55 grm. Module (4). Brilliant condition. B.M. [Pl. XVIII. 14.] Compare Cohen No. 199—SMN

Cohen also publishes a larger piece (module 5) weighing 6.58 grm. ("M. Hamburger"). This larger piece belongs to the *solidus* standard, representing $1\frac{1}{2}$. No. 47, itself, is clearly an *aureus* of the 60 to lb. class.

This group of six coins distinguished by presenting heads of the tutelary Gods of the tetrarchy, and by their similar fabric, seem to represent the *tour de force* of an engraver attached to the Treves Mint, to which they all belong. Of the superior skill in portraiture at this mint the head of Constantius Chlorus on the gold *quinio* (Pl. XVI. 2) affords conspicuous evidence. In the succeeding early Constantinian epoch we see this excellency shared, especially by the facing heads, at Rome, Ostia, and Pavia (Ticinum), while, by a curious reversal of more ancient conditions, throughout the Greek-speaking world this age is distinguished by the coarseness of its monetary portraiture. Nikomedia, Antioch—highly civilized as it undoubtedly was in many respects—and Alexandria display an ascending scale of grossness.

An interesting metrological feature presented by this group is the recurrence, in two cases out of six, of weights of somewhat over 5 grm., while the brilliantly

preserved specimens, Nos. 43 and 45, scale 4.95 grm. This, it is true, is above the *solidus* standard of about 4.50 grm., but on the other hand it is well below the 60 to a pound system of about 5.40 grm. Their weight, in fact—to a fraction of a fraction—is exactly half-way between the *solidus* and the *aureus*.

At the same time the *aureus* type of Galerius with the head of Sol Invictus, though itself of full weight, is paralleled by a slightly larger example of the same type belonging to the regular Constantinian series of $1\frac{1}{2}$ *solidus* pieces weighing somewhat over $6\frac{1}{2}$ grm.

The fact that Constantius Chlorus is shown, from a specimen recorded in the Old French Catalogue, to have also struck the type presenting the bust of Mars Propugnator, with his Augustan title, involves the conclusion that the original issue of this closely connected group belonged to the close of his Caesarean period. In other words, we may fairly regard these pieces as having been issued at Treves in the name of all the members of the tetrarchy in A.D. 304.

The preponderance of coins from the Treves mint is itself overwhelming. Of the fifty-two coins mentioned in the above list, seven show no mint mark, four bear that of Rome, three of Pavia (Ticinum), one of Siscia and one of Carthage, while thirty-five bear the Treves mark, TR or, more exceptionally, PTR (Percussa Treveris).

9. *Indications of the Date at which the Arras Hoard was deposited.*

The very precise evidence afforded by the existence of the brilliant group of coins, Nos. 41–47, found one

and all in perfect mint condition, makes it difficult to avoid the conclusion that the Hoard itself was withdrawn from circulation not more than a year or two after A.D. 304. This conclusion is strongly reinforced by the occurrence among the coins of this hoard of a whole series of pieces of the characteristic "compact" style of small module referred to above. These are dated by the examples referring to Diocletian's *Vicennalia* round about A.D. 303. Nos. 8, 14, and 33 of the above list directly refer to that celebration. The bulk of the coins of this class are in mint condition. Others of this fabric and of similar fine preservation exist elsewhere.

The latest coins found in the Hoard, so far as a date is ascertainable, are the *denio* already described⁹⁶ of Constantine the Great with the reverse legend **PRINCIPI IVVENTVTIS**, based as we have seen on the *solidus* system, and two specimens of the corresponding *solidi*.⁹⁷ The fact that the *solidus* standard really owes its inception to Constantius Chlorus—of which I hope to have supplied sufficient evidence—makes it no longer necessary to infer that these examples cannot be earlier than A.D. 309 or 310.⁹⁸ As has been pointed out above, this legend and type belong of right to the Caesarean period of Constantine's issues, where they are well represented in bronze, and, as we have seen, a half-*solidus* of this type occurs with the title

⁹⁶ See above, p. 226.

⁹⁷ Agnes Baldwin, *Four Medallions from the Arras Hoard*, p. 5 and Fig. 2. Another, probably in this case really belonging to the Hoard, was contained in the Ratto sale of April, 1923 (No. 447).

⁹⁸ As for instance by Baldwin, *op. cit.*, p. 5, following Maurice.

of **CONSTANTINVS CAES.**⁹⁹ The medallion may have been struck to record the elevation of Constantine to the Augustan dignity by Maximianus Hercules on the occasion of the younger Emperor's marriage to his daughter Fausta in 307.¹⁰⁰ The laboured protestations, indeed, of his panegyrist that Constantine had waited for this auspicious occasion to accept the title might lead us to infer that it had been earlier conferred on him by general consent in the Prefecture of the Gauls.

It is important to observe that the *solidi* of Constantine as Augustus with the inscription **PRINCIPI IVVENTVTIS** and the same type, together with an allied group of early *solidi* belonging to himself and his colleagues, fit on in fabric to the compact style that characterizes the *aurei* of the period from 303 to 305. The module itself, as is natural with a coin of somewhat smaller denomination, is somewhat small, $3\frac{1}{2}$ to $3\frac{3}{4}$ of Mionnet's scale as compared with about 4.

With the exceptions given above, Constantine the Great is hardly, it appears, represented in the Hoard. Nor have I been able to trace a single specimen of Licinius, who began to reign in 307. A late *solidus* of Maxentius with the Augustan title, in my possession, said to have come from the Hoard, bears no trace of the silvering on its surface and will not therefore pass the "acid test".¹⁰¹ It is also claimed that there came from

⁹⁹ No. 41 of the above list also represents an *aureus* (5.5 grm.) of Constantine as Caesar struck at Treves and bearing this reverse inscription with a variant type.

¹⁰⁰ Galerius only conferred on Constantine the title of "Filius Augustorum" in his dominions in 307 (till 308).

¹⁰¹ Another specimen (from the Ratto sale) is now in the Jameson Coll. (*Cat.*, iii, No. 476). Both coins show the facing head and are in mint condition.

the Treasure¹⁰² a *solidus* of Constantine as Augustus with the inscription SPQR OPTIMO PRINCIPI—PTR and the three standards which seems clearly to have been issued after Constantine's defeat of Maxentius in 312.

Admitting that owing to circumstances of which we have no knowledge, stray pieces of a slightly later date may have been deposited near the spot, it is difficult to avoid the conclusion that the Hoard, as a hoard, was segregated not later than 306. As already mentioned, a whole series of types of related fabric in mint condition belong to the years A. D. 304, 305.

ARTHUR EVANS.

¹⁰² A. Baldwin, *op. cit.*, p. 7; illustrated in Fig. 3. This is perhaps the piece which weighs 4.30 grm., now in the Brussels Museum.

MISCELLANEA.

A LATE ROMAN HOARD FROM NORTHAMPTONSHIRE.

DURING 1927, 1928, and 1929 the Rev. H. O. Cavalier, who was at that time Rector of Great Brington, Northamptonshire, was engaged in tracing the foundations of a large Romano-British building in a field known locally as "Sharoah", situate on the east side of Nobottle Wood, to the North of the road, probably Roman, connecting Duston and Norton, Northamptonshire (v. "Roman Britain in 1927", *J.R.S.*, vol. XVII, ii, p. 202).¹

This building could not be dated with certainty, but was, in all probability, in use during the middle of the second century A.D. On the last day available for excavation, Mr. Cavalier decided to trace a cross-wall, but at once came upon a hoard of coins before one spadeful of soil had been removed from the surface of the field.

The coins seem to have been contained in a cloth bag of some kind, of which slight traces were noticed, and concealed behind and beneath a wedge-shaped stone, which lay slantwise against the foundation of the cross-wall, which was being traced. Nothing was found elsewhere on this site to indicate occupation or the date of the hoard.

The coins are the property of Earl Spencer, who has very kindly allowed them to leave Althorp, temporarily, for purposes of identification.

In addition the writer would like to thank Mr. G. C. F. Hayter, B.A., F.S.A., who has checked the majority of the identifications and been a continual source of help; also Mr. J. W. E. Pearce, M.A., and Mr. Harold Mattingly, M.A., for valuable advice and assistance in cases of difficulty and doubt.

The following tables show the distribution of the coins among rulers, types, and mints, and in style, are based mainly upon those contained in the second Richborough report.

Discussion of points of particular interest follows the tables.²

¹ It is intended to publish the hoard in full together with a Report of the whole excavation in the *Transactions of the Northamptonshire Archaeological Society*.

² The number following the mention of a particular coin refers

TABLE I.

<i>Period.</i> C. A. D.	<i>Summary.</i>	<i>Total.</i>
164-307	Lucius Verus	1
	Claudius II Gothicus	2
	Allectus	1
	Radiate Crowns unat- tributed	4
		8
307-364	Helena	2
	Theodora	4 (1 clipped)
	Constantine I	2 (1 clipped)
	Constantinopolis	2
	Urbs Roma	2 (1 clipped)
	Hybrids	2
	Constantine II	3
	Constantius II	3
	(Probably Constantius II)	2
	Constans	8 (2 clipped)
	Constantius II or Constans	9
	House of Constantine	11
364-388	Magnentius	2
	Valentinian I	9
	Valens	12
	Gratian	7 (4 clipped)
	House of Valentinian	13 (5 clipped)
	Magnus Maximus	5
	Victor	3
388-395	Magnus Maximus or Victor	2
	Eugenius	5
	Valentinian II	47
	Theodosius I	60
	Arcadius	133
	Honorius	70
		House of Theodosius
		548

to its position in the full publication to be published in the *Transactions* noted above.

TABLE I (*continued*)

Illegible—probably Theodosian	96	
Fragments of about	59	
	—	155
Total of hoard		814

Proportion of illegible coins about 19 per cent.

TABLE II.

ANALYSIS OF MINT-MARKS. A.D. 364-395.	ARLES	LYONS	TREVES	AQUILEIA	ROME	SICILIA	NICOMEDIA	THESSALONICA	ANTIOCH	NIL	TOTAL
<i>House of Valentinian.</i>											
Valentinian I	4				2	1				2	9
Valens	2		1		3					6	12
Gratian	1	2								4	7
Unassigned					2					11	13
<i>Theodosian Period.</i>											
Magnus	2		1	1						1	5
Victor			2							1	3
Unassigned	1									1	2
Eugenius		1			1					3	5
Valentinian II	16	5		3	5	1				17	47
Theodosius I	15	5	3	6	9		1	2		19	60
Arcadius	40	16	2	11	1				1	62	133
Honorius	11	3	1	4	10					41	70
Unassigned	25	5	6	1	26					170	233
TOTALS	117	37	16	26	59	2	1	2	1	338	599

TABLE III.

Mint-marks of "Victoria Auggg" type.

ARLES.

	OF I	OF II	OF III
Valentinian II .	6	2	2
Theodosius I. .	4	6	—
Arcadius . .	9	6	13
Honorius . .	—	—	5

LYONS.

	OF I	OF II
Valentinian II .	3	1
Theodosius I. .	3	—
Arcadius . .	9	—
Honorius . .	2	—

"Salus Reipublicae" type.

ROME.

	OF I	OF II	OF III	OF IV	OF V
Valentinian II	—	2	—	—	—
Theodosius I.	—	—	1	—	—
Arcadius . .	—	1	—	—	—
Honorius . .	3	—	2	1	—

The majority of the coins minted prior to A.D. 364 included in this hoard are 3Æ degraded in size, whether struck on insufficient flan—a common failing—worn, or definitely clipped. The clipped coins number fourteen, five of them being Constantinian, the remainder of the House of Valentinian. On the other hand there are a few notable exceptions, larger and better coins, which have escaped the melting-pot. These include no. 1, an As of Lucius Verus; no. 4, an Antoninianus of Allectus; no. 16, a reduced Follis of Constantine I (*Sarmatia Devicta*) in mint condition; no. 26, reduced Follis of Constantius II (*Provid. Caess*) also mint and no. 164, a 2Æ of Theodosius, which, however, has been cut into at three places. A number of coins of Valens are of good 3Æ size, but the majority of these types are much reduced, worn or intentionally broken into fragments for subsequent use.

Very few barbarous coins occur in this hoard; there are 13: 3 Radiate Heads, 7 Constantinian (including 6 *Fel Temp. R.* type), and 3 Theodosian. This number does not include "semi-barbarous" coins. A criterion is hard to find for cases of this kind, but in the present instance misspellings such as **ARCADIS** for **ARCADIVS** (no. 355), **HONORIS** (no. 425) and **HONRIVS** (no. 426) for **HONORIVS** and general bad lettering, which, however, is intelligible and in the correct order, is taken as an indication of ignorance and lack of supervision in the official mints rather than of local unofficial efforts or fraudulent issues.

The Theodosian barbarous coins are as follows: no. 657—Barbarous head but DN[]F AVG legible, *rev.* Victory type: legend •LVICTO—and row of small dots in exergue, No. 658—Barbarous Victoria Auggg type, end of legend reading, apparently—RAIGGG, No. 659—Two Victories type, mint-mark IIII (*sic*) good portrait, possibly Theodosius, and illegible lettering.

There are three interesting overstruck coins:

No. 46—*Obv.* Barbarous bust and legend illegible, but probably Constantius II superimposed on Two Victories with wreath type (DD AVG legible).

Rev.—Barbarous FEL TEMP REPARATIO type with mint-mark PZV (*sic*) overstruck on diademed bust [N]STANTI[].

No. 223, Theodosian Victoria Auggg type made flatter and larger by being overstruck with Theodosian obverse on original reverse.

No. 356, Apparently Salus Reip. type on obverse and obverse on Victoria Auggg; overstruck only on half of the coin.

As far as can be ascertained the following variations of mint-mark have not hitherto been recorded:—

No. 112, Eugenius: Spes Romanorum type [R]€.

No. 569, House of Theodosius: Victoria Auggg type $\frac{S|}{LVGP}$, but cf. $\frac{V|}{LVGP}$ (Richborough 2005–33), and $\frac{S|}{\text{triple wavy line}}$ (Richborough 15525–9057).

No. 149, also, is interesting:—Valentinian II: Victoria Auggg type LVGP, with the dot very plainly marked.

Before discussing the tables of mint-marks, it may be of interest to state that the coins of this hoard are in a good state of preservation. Including all fragments the totally illegible coins comprise only 19 per cent. of the hoard. This adds weight to arguments deduced from the statistics given, because it argues a truer representation of the money in use at the date of the hoard.

Table II, showing the mints of the main body of the hoard, and Table III, the officinae of individual mints, although the latter is not of very great use on account of the comparative smallness of the hoard, reveal a tendency in almost every direction to support the results obtained from previous finds, e.g. Richborough, Weymouth Bay (*Western Gazette*, Jan. 31, 1929), and Icklingham (*Num. Chron.*, Miscellaneous, vol. ix, series 5). They show, also, that this hoard

is in agreement with those from Weymouth Bay and Icklingham against the Richborough finds regarding the predominance of Honorius in the *Salus Reipublicae* type (at Rome) and the greater illegibility of his coins. Whereas at Richborough the total number of the coins of Honorius is only about 15 per cent. of that of Arcadius and 7.5 per cent. of all four Theodosian emperors, here it is 23 per cent. of the Theodosian total, more than half that of Arcadius and more than the totals of Valentinian II and Theodosius.

The evidence, therefore, would seem to point to a slightly later date in this case, as in the cases of Weymouth Bay and Icklingham (v. articles quoted above), than usual for such hoards in this country. This seems all the more remarkable in view of the site of this hoard in the centre of the Midlands, where late hoards of any kind are unusual, whereas Richborough, which might be looked upon as the main port of entry for coinage, fails to give this evidence of fresh monetary supplies later than A.D. 395.

Yet a glance at the *Ordnance Survey Map of Roman Britain* will show a possible explanation of the difficulty. The present site, approximately, under the "h" of Whilton Lodge and a few miles east of Bannaventa on Watling Street, on the hills of Northamptonshire is a most likely place to find evidence of a continuance of Romano-British country life, which elsewhere had been largely broken up by bands of invaders, who, as we are coming to learn, slowly but steadily pushed their way up the river valleys. This high ground, at the head waters of the Warwickshire Avon and of the Nene, may well have formed a refuge for some of those evicted country dwellers, who did not flock to the protected towns.

B. H. ST. J. O'NEIL.

CATALOGUE OF LANTERN SLIDES.

The new Catalogue of Lantern Slides (pp. 93) is issued to Fellows with this number. Additional copies may be obtained from the Secretary. (Price one shilling).

REVIEW

A Corpus of Italian Medals of the Renaissance before Cellini.

By GEORGE FRANCIS HILL. In two vols., folio. Vol. i: pp. xvii+371; vol. ii: pp. vii with 201 plates. London: British Museum. Printed by order of the Trustees. 1930. Price £7 7s.

The only person qualified to review this book properly is the author himself. As this can hardly be done, a colleague, who has seen the work grow from the time it filled a notebook or two to the day when the Printer to the University of Oxford was able to say "Make a large book; a folio", may be permitted to tell briefly what the book contains, and to take the opportunity to incorporate a few suggestions by the author himself.

The *Corpus* is in two folio volumes, one of text and one of plates. In the text the medals are as far as possible classified under artists and schools, and these are arranged chronologically. The unit is a brief biography of the artist followed by a list of his works. Only those who have seen this book develop, and know how much of his vacations Mr. Hill has spent in research in Italy, can realize the amount of labour he has spent on it.

The book represents the digestion of material, the collection of which has been spread over some twenty-five years. For the first eighteen of these, the work was done unofficially, as a parergon, since the author's official activity was concerned with the Catalogue of Greek Coins. Later, when the Trustees of the British Museum agreed to publish the *Corpus*, it became an official undertaking. But the present volumes represent only about half the material which Mr. Hill has actually collected; for there is a mass of notes and descriptions of the Italian medals produced between about 1530 and 1600, which would have taken too much space and time to incorporate. These have been mounted and handed over to the Medal Room of the Museum, where they are available for reference.

The principle of publishing books which are more than

catalogues of the actual collections belonging to the Trustees is not for the first time honoured in these volumes; the great work of Hawkins, Franks, and Grueber was in effect a *Corpus* of the same kind; and the Museum Catalogues of Coins, in recent volumes, are furnished with supplementary descriptions and illustrations of important specimens in other collections. It is obvious that such comprehensive treatment adds immensely to the usefulness of a catalogue.

In these volumes an attempt has been made to give, not a merely summary account, but what a numismatist, dealing with coins, would recognize as a full numismatic description, of every item, taking note of position and spacing of inscriptions, character of lettering, and other details which have hitherto as a rule been ignored. The axial relations of obverse and reverse have also been noted in a large number of examples; this refinement, as some may call it, may occasionally be useful, since, for instance, where this relation is not fixed, a struck original is indicated, though only casts may have survived; and again, some artists show a distinct preference for casting their reverses the right way up, or upside down. This may help a little in cases of doubtful attribution.

To each medal described is attached a list of the specimens known. This is a feature of the book which has certain advantages, in that it will enable the reader to see where he can, if he wishes, examine a specimen. Incidentally, it is of interest to know if a medal was very popular, or exists in very few casts. But the mention of a specimen in this list does not guarantee its quality, since the author may know it only from some not too trustworthy publication; and it is arguable that he would have done better service (and saved much space) by confining his mentions as far as possible to pieces of which he could guarantee the quality.

The printing has been done by the Oxford University Press, and is of the high standard which is to be expected. Possibly the running numbers of the medals might have been made to stand out more clearly; but there is always a difficulty in emphasizing such points without making the page spotty. The inscription type specially designed for the book is on the whole very satisfactory; but the sloping O is not always suitable. The colotype plates, by the Chiswick Press, are of varying excellence. The reproductions from photographs contrast—not always to their own advantage—with those from casts; but since the originals

are scattered over so many collections in Europe, whence casts were sometimes unobtainable, and where photographers were not always competent, inequalities of this kind were unavoidable.

A few points of detail may be noted :

No. 59. Laurana, René d'Anjou and Jeanne de Laval. The left hand of Pax does not rest on cippus, but is unsupported.

No. 102. Coradino, Ercole I d'Este. Ercole wears a cap with a fluted crown, not as, by a printer's transposition, he is described.

No. 139. The photograph supplied to the author must have been reduced. The piece actually measures 63×37 mm.

No. 304. In the signature read CLEMENTIS.

No. 371. For *Astrologicus* read *Astrologus*.

No. 411. Antonello della Moneta was also a printer.

No. 984. The "illegible signs" under the bust of Roberto Macigni, seen in a good light, are clearly the date 1495.

No. 1149. Albaresano. The British Museum has recently acquired a specimen in lead of the obverse alone, which justifies the author's doubts, since it has the signature of Pastorino and the date 1558.

No. 1156. Carrara. It is possible that the incised inscription DE CAR and the *carro* on the reverse are unwarrantable additions, and that the boy is really the young Francesco Sforza, son of Giangaleazzo, and Conte di Pavia.

No. 1202. A leaden cast of the obverse of the medal of Mohammad II which was so murdered by Tricandet has been found in a private collection and is about to be published. It shows the style and lettering of the original, but unfortunately we are still without any suggestion as to its authorship.

No. 1332. Unknown lady. This was already mentioned by Armand (II, 179, 14).

J. A.

XI.

GREEK COINS ACQUIRED BY THE BRITISH MUSEUM IN 1929.

[SEE PLATES XIX-XXI]

THE acquisitions of this year have been well up to the average in interest and in importance. As usual, I have profited by consultation with Mr. Robinson in drawing up the following notes. Omitted are such coins as are likely soon to be published in the Museum Catalogues of N. Africa and Spain; as also the important coins from the Delta Find (already described by Mr. Robinson in this volume of the *Num. Chron.*, pp. 93-106), from the Warren Find of Tarentines (thoroughly examined by Mr. Vlasto, *ibid.*, pp. 107-163), and the coins of Ephesus and the Carian Dynasts from a hoard said to have been found at Makri, about which Mr. Robinson has an article in preparation.

The acquisition of the Doguel Collection has greatly strengthened the series of the Greek mints of S. Russia and of the S. Coast of the Euxine. The coins acquired are for the most part rather useful in completing series than individually interesting; but a few of the rarer or better preserved specimens will be mentioned in their proper places.

TEMESA OR TERINA.

1. *Obv.* Tripod-lebes ; on r., crab ; on l., **ΟΡ** downwards, over **ΣΤ** partly erased in the die. Border of dots on raised band.

Rev. Tripod-lebes incuse ; on r., crab, on l. **ΥΡΟ** upwards ; incuse border of radiating dashes.

At 27 mm. Wt. 7.90 grm. (121.9 grn.). [Pl. XIX.] *B.M. Quarterly*, iv, p. 101, Pl. LVI b. 1. From a small hoard of S. Italian incuse coins, formerly in the possession of the late E. P. Warren of Lewes. A second specimen, from the same dies and from the same source, is in the collection of Dr. A. H. Lloyd. A third, from the same obverse die, in the McClean Collection (Grose, p. 195, no. 1647, Pl. 52. 4).

Mr. Grose reads the letters under the present obverse inscription as **ΣΜ**, and also a sign in the exergue, which is however, as Dr. Lloyd, having re-examined the coin, agrees, probably a mere accidental mark ; he describes the coin as restruck over Metapontum. But the identity of the three obverses shows that this is a case not of overstriking, but of a corrected die. Also the first letter is clearly **Τ** not **Μ**.

The die was therefore originally cut for a place *Te* near Croton, and this can only have been Temesa or Terina.

Ignoring what is obviously unauthentic,¹ we may consider the following coins which have been published in connexion with the early history of Temesa or Terina :

(a) *Obv.* Tripod-lebes ; on l. upwards, **ΥΡΟ** Border of dots on raised band.

¹ Prospero Parisio, *Rariora Magnae Graeciae Numismata*, 1683, Tab. xi. 9 ; cp. Eckhel, *Doctrina*, i, p. 182.

Rev. Helmet, crestless, and border of radiating dashes, all incuse.

R Stater. Berlin. 7.94 grm. Cp. Garrucci, *eviii.* 27 ; Babelon, *Traité* 2170 (from Garrucci).

(b) *Obv.*  Helmet.

Rev. Tripod between a pair of greaves.

Paris 2056. 19 mm.

Jameson 464. 18.5 mm. 7.88 grm.

See Mionnet, i. 204, 903 ; *Supp.* i. 351, 1074, Pl. XI. 5.

The Paris specimen has an accidental damage in the field behind the crest of the helmet. This defect was taken by Becker, or rather by his assistant Zindel,² for an annulet or omicron, and as such it appears in the wonderfully accurate forgery which he made in 1827-8. Close examination of the Becker-Zindel production shows other minute deviations from the model, but, in the circumstances it is not surprising that some have supposed all the staters of this type to be false.

(c) *Obv.* Tripod.

Rev. Helmet.

R Italic stater, of dumpy fabric.

This has been frequently described, from more or less imperfect specimens, e.g.: (α) B.M.C. Temesa, no. 1 (no inscriptions given). (β) Jameson, no. 441 ; described as reading on tripod side φ PO on l., τ E or r., and on helmet side φ PO retrograde again. This tripod side is from the same die as (γ) a specimen acquired by the British Museum in 1882 ; and two specimens (δ, ε, 7.99 and 7.77 grm.) at Berlin. These between them

² Hill, *Becker the Counterfeiter*, i, no. 14.

make it fairly clear that what we have to the right of the tripod is †T , the **T** being engraved over a circular sign which may be the first or the third letter of ?PO . Since the die in its original condition is not likely to have had ?PO twice over, it is possible that the engraver began to engrave a ? and then, immediately discovering his mistake, engraved the **T** over it, or possibly he had intended to engrave **TO** in continuation of the ethnic. (ζ) H. Weber no. 1008 = Lucerne Sale iv, 159. Obv. inscriptions illegible. Apparently same dies as β - ϵ .

- (d) *Obv.* Tripod-lebes; on r. O? upwards; on l., crab. Border of dots on raised band.

Rev. Tripod-lebes incuse; on r. O? upwards, on l. **TE** upwards (these insers. are in relief). Border (incuse) of radiating dashes.

Stater of flat fabric. Garrucci eviii. 28; Babelon, *Traité* 2171 (from Garrucci).

- (e) *Obv.* Tripod-lebes; on l. upwards, ?PO ; on r. downwards, **TE**. Raised guilloche (?) border (details worn).

Rev. Tripod-lebes incuse; on r. **TE** in relief. Border (incuse) of radiating strokes.

Babelon, *Traité* 2172, Pl. LXX. 10 = Luynes 746.
A. H. Lloyd = Evans ex Benson, lot 110, ex Bunbury.
Stater of thick fabric.

- (f) *Obv.* Tripod-lebes; on r. ?PO upwards. Border of dots.

Rev. Corinthian helmet l. Border of incuse radiating dashes.

Third of stater. Cp. B.M.C., *Croton* 42. Grose, Fitzwilliam Catalogue, no. 1682. Another at Paris, no. 747.

(g) *Obv.* Tripod-lebes. No inscr. Border of dots.

Rev. Corinthian helmet r. Border of dots.

Sixth (?). Paris, no. 748.

Garrucci maintains that the abbreviation **TE** on coins of Croton stands for Terina, since Temesa is abbreviated **TEM**. The helmet on the later double-relief tripod-helmet coins cannot, he says, represent Temesa, because one finds **ῬPO** inscribed against it, where one would expect the initials of Temesa. As to this, it may be observed that the Greeks were illogical in such matters, as is proved by the sixths of Sybaris and Poseidonia, where we find **ΣΥ** on the Poseidon side and **ΠΟ** on the Bull side.²

With regard to the variety (a) Garrucci mentions Minervini's suggestion that the helmet represents Temesa, objecting at the same time that the helmet on the coin inscribed **TEM** is crested.

The ancient authorities on Terina are collected by Regling, at the beginning of his monograph on that place. We know nothing of its history before the second half of the fifth century, except that the well-known coinage begins about 480. Regling rejects the attribution to Terina of the coins with which we are concerned in favour of Temesa (*Terina*, p. 32 and p. 69 note 1 c); in that time, he says, Terina did not exist or was not yet independent.

Finally Babelon in his *Traité* assumes that **Te** represents Terina, and does not consider the claims of Temesa at all. The portion of his work, however, in which the double-type coins would have appeared, was unfinished at his death and has not yet been published.

² Hill, *Hist. Gk. Coins*, p. 51.

The question cannot be regarded as settled, but the probability seems to me to be greatly in favour of the attribution of these coins to Temesa, standing not so much in alliance with as in subjection to Croton, at the mint of which city the dies were doubtless made.

TYRA.

2. *Obv.* Head of young Heracles r., in lion-skin.

Rev. **TYPA** above bull standing r. on club.

Æ ↑ 13.5 mm. 2.75 grm. (42.5 grn.). [Pl. XIX.]

From the Doguel Collection.

OLBIA.

3. *Obv.* Head of Demeter l., wreathed with corn.

Rev. Sea-eagle l. on dolphin; behind eagle's tail, bow in case; above **ΜΟΞΙ**; below **ΟΛΒΙΟ** Incuse circle.

Æ ↓ 21 mm. 8.53 grm. (131.6 grn.). [Pl. XIX.]

From the Doguel Collection.

4. *Obv.* Head of Demeter l. as City-goddess, wearing turreted crown wreathed with corn; hair in long loose locks, and earring.

Rev. Archer kneeling l., shooting; quiver at waist; on r. downwards **ΞΩΞΤΡΑ**; inscr. in exergue off the flan.

Æ ↓ 18 mm. 5.02 grm. (77.4 grn.). [Pl. XIX.]

From the Doguel Collection.

Cp. Burachkov, Pl. VII. 152.

5. *Obv.* Head of Borysthenes bearded and horned, l.

Rev. Battle-axe and gorytos. On r. upwards **ΟΛΒΙΟ**, on l. upwards **Ξ**

Æ → 25 mm. 11.24 grm. (173.5 grn.). [Pl. XIX.]

From the Doguel Collection.

6. *Obv.* Head of young Heracles r. wearing lion-skin.

Rev. Club, horizontal; above, ΟΛΒΙΟ; below, ΕΙΡΗΒΑ
Concave field.

Æ ↑ 22 mm. Wt. 7.73 grm. (119.3 grn.). [Pl. XIX.]

From the Doguel Collection.

Cp. Bur. IV. 42.

7. *Obv.* Bust of Apollo r., laureate; in front, bow; inser.

~ [Ο]ΛΒΙΟΠΟ ΛΕ

Rev. Eagle standing r. on dolphin; on r. ΧΑΛ

Æ ↑ 25.5 mm. Wt. 9.19 grm. (141.8 grn.) [Pl. XIX.]

From the Doguel Collection.

Cp. Bur. vii. 169.

8. *Obv.* Bust of Apollo r. laureate; below, dolphin(?); in front, bow; behind, Χ(?) and Θ; inser.—

ΟΛΒΙΟΠΟΛΕΙΤΕΩΝ

Rev. Eagle standing l. on thunderbolt; inser., on r.

ΠΙΣΙΣΤΡΑ, in exergue ΥΟΤ, on l.

ΥΟ
ΔΑΔΑΚ Border of dots.

Æ ↓ 32 mm. 15.42 grm. (238.0 grn.). [Pl. XIX.]

From the Doguel Collection.

Cp. Bur. viii. 173.

Inensimeus.

9. *Obv.* Head of king r., bearded and diademed; behind,

Χ; inser. ΒΑΣΙΛΕΩΣΙΝΙΣΜΕΩΣ Border
of dots.

Rev. Head of City r., wearing turreted crown, wreathed;

inser. ΟΛΒΙΟΠΟΛΕΙΤΕΩΝ ΧΣΑ

At drachm ↓ 19 mm. Wt. 3.36 grm. (51.8 grn.).

[Pl. XIX.]

From the Doguel Collection.

Cp. Bur. ix. 212.

CHERSONESUS TAURICA.

10. *Obv.* Head of Artemis (?) l., above a fish. Border of dots.

Rev. Club, horizontal; above, **XEP** Border of dots; incuse circle.

Æ obol → 9 mm. 0.47 grm. (7.2 grn.). [Pl. XIX.]

From the Doguel Collection.

11. *Obv.* Female head l., hair bound with fillet and taken up at back in sling.

Rev. Fish and club horizontally; below **XEP**

Æ ↓ 16 mm. 3.97 grm. (61.2 grn.). [Pl. XIX.]

From the Doguel Collection.

Cp. the silver coin, Bur. xiv. 25.

12. *Obv.* Artemis seated r., sighting an arrow; before her, a stag standing.

Rev. Bull l. with lowered head and raised l. foreleg, on club; above, **XEP**

Æ ↑ 22 mm. 9.76 grm. (150.6 grn.). [Pl. XIX.]

From the Doguel Collection.

Cp. Bur. xiv. 36.

13. *Obv.* Head of lion r.

Rev. **XEP** and three pellets between the six spokes of a wheel.

Æ 12 mm. Wt. 1.50 grm. (23.1 grn.). [Pl. XIX.]

From the Doguel Collection.

Variety of Bur. xv. 71.

MENDE.

- 14-15. The staters of Mende with the sun-disk and four-palmettes reverses have so often been published,⁴ that it is not necessary to describe in detail the

⁴ These actual specimens are illustrated in *B. M. Quarterly*, iv, 3, 1929, p. 50, Pl. VI. 1, and IV. 4, 1930, p. 102, Pl. LVI b. 2.

admirable specimens which the Museum has acquired. That with the sun-disk [Pl. XX. 14] is of the dies described by Noe² under no. 86; that with the palmettes [Pl. XX. 15] is no. 82. The former has been presented by Mr. C. S. Gulbenkian, the latter by Mr. Stephen Courtauld. Thanks to the generosity of these gentlemen, to whom the National Collection already owed so much, the series of types of Mende (though not of course in all the varieties) is now completely represented in the Museum.

ATHENS.

- 16-23. The generous gift by the Rev. Edgar Rogers of all such of his bronze coins of Athens as the Museum requires, has enabled us to add many fine specimens to our already rich series. I illustrate only a few specimens which seem to give a better idea of the type than those figured by Svoronos in his *Trésor*. Of the various Athena types, Pl. XX. 16 corresponds to Svoronos Pl. 85. 27; Pl. XX. 17 to Svor. Pl. 86. 32 ff.; Pl. XX. 18 to Svor. Pl. 88. 6-7. Pl. XX. 19, corresponding to Svor. Pl. 90. 5, with owl, olive-tree and vase, shows clearly the branch under the inscription in the exergue. Pl. XX. 20 is a good specimen of the Farnese Hercules (Svor. Pl. 95. 3); Pl. XX. 21 of the Theseus and Minotaur (Svor. Pl. 96. 1 ff.); and Pl. XX. 22 of the bucranium (Svor. Pl. 99. 1 ff.). The Acropolis (Pl. XX. 23; cp. Svor., Pl. 98. 32 f.) is especially interesting as showing the great altar of Athene Polias to the left (east) of the Parthenon; a feature which, I believe, has not been noticed on any other specimen of this coin.

NEOCAESAREA PONTI.

24. *Obv.* Head of Tiberius r., bare; behind, **TIBEPION**; in front, illegible inscription, apparently **TIBEP** confused by recutting other letters (? **CEBA**) over the word.

² *Num. Notes and Monographs*, no. 27.

Rev. Thunderbolt upright; inscr. Ω NEOKV ICAPEIC
R \uparrow 15 mm. Wt. 3.32 grm. (51.3 grn.). [Pl. XX.]
 From the Doguel Collection.

There can be little doubt about the attribution of this coin to Cabeira-Neocaesarea, and none about the identification of the head on the obverse. It therefore fills a gap in the history of the place.⁶ It is said that Pythodoris (8 B.C. to A.D. 22-3?) resided at Cabeira, and gave it the name of Sebaste; and it has been suggested that the coins of Pythodoris and Polemon II were struck there. This coin makes it clear that in the time of Tiberius the place had received the name of Neocaesarea. Hitherto the first mention of the place under that name was to be found in literature in Pliny (vi. 2), and on coins under Trajan. The inscription on this coin is in the honorific form Τιβέριον Νεοκαισαρεῖς (ἐτίμησαν).

COLOPHON.

25. *Obv.* Head of Apollo r., with long hair, laureate, one end of the tie of the wreath turned up and ending in a fringe.

Rev. Apollo as Kitharoides, standing r., l. resting on kithara, r. holding lustral branch with fillets; behind, downwards, ΚΟΛΟΦΩΝΙΩΝ All in laurel-wreath.

R Attic tetradrachm \uparrow 34 mm. Wt. 15.75 grm. (243.1 grn.).

From Aleppo [Pl. XX]. *B.M. Quarterly*, iv. 2, p. 35.

This rare coin was previously known only from the poorly preserved specimen at Paris.⁷ It belongs, of

⁶ See the summary in the *Recueil* I. i (2d. ed.), p. 116.

⁷ Babelon, *Inventaire Waddington* 1489.

course, to the period following 190 B.C., and the nearest parallel is perhaps to be found in the Apollo tetradrachms of Myrina of the same period. For some time before 188 B.C. Colophon had been under Pergamene rule. In 189 the Colophonians, or at any rate those of them who inhabited Notion, were declared free by the Romans.⁸ It is to this period of freedom that the coinage belongs.

CNIDUS.

26. *Obv.* Infant Heracles, kneeling r., on exergual line, struggling with two serpents; inscr. Σ above, Y on r., N in exergue.

Rev. Head of Aphrodite r., hair rolled and taken up in sling behind; wears earring and necklace; in front of neck, small prow; inscr. on r. downwards and on l. upwards [K]N[I] $\Delta\Omega\text{N}$
Incuse square.

R \rightarrow 21 mm. Tridrachm. 11.40 grm. (175.9 grn.).
[Pl. XXI.]

From the same dies as the Berlin specimen, *Z.f.N.*, xxv. 210, Pl. VII. 4; from same obv. die as B.M.C. *Caria*, Cnidus, no. 27, Pl. XIV. 9.

For the latest discussion of the group of coins, issued by various cities in alliance against Sparta after 394 B.C., see *Num. Chron.*, 1928, pp. 10-11.

The obverse shows one detail which has not been noticed before, and that is a straight line, like the letter I, radiating outwards, just under the neck of the serpent which Heracles grasps with his left hand. It is faintly visible in the photograph of the Berlin specimen. It has nothing to do with the letter N,

⁸ See Büchner in P.W.K., *R.E. s.v. Kolophon*, col. 1118.

which the other specimens, of which the lower part is preserved, shows to be in the exergue. I cannot explain it.

27. *Obv.* Busts of Caracalla (laureate, wearing cuirass and paludamentum) r. and Plautilla l., confronted; inser. $\text{Q AY}\cdot\text{K}\cdot\text{M}\cdot\text{AYP}\cdot\text{ANT}\Omega\text{NEINOC}$ and $\text{C} \dots \text{ΠΛΑΥΤΙΛΛΑ}$ Border of dots.

Rev. The Aphrodite of Praxiteles; inser. on l. upwards $\text{KNID}\iota$, on r. downwards ΩN Border of dots.

$\text{Æ} \uparrow$ 32 mm. 13.98 grm. (215.8 grn.). [Pl. XXI.]

From the same dies as the Paris specimen, which, however, has been tooled.⁹ The new specimen, though slightly worn, is otherwise fortunately quite unspoiled.¹⁰

RHODES.

28. *Obv.* Head of Helios facing, slightly inclined to r.

Rev. Rose with bud on l.; above, $[\text{P}]\text{O}\Delta\text{ION}$; between bud and rose, Φ ; in field r. phiale with umbilicus. Incuse square.

$\text{Æ} \uparrow$ 26.5 mm. 14.99 grm. (231.3 grn.). Formerly in the Balthasar Coll. (Olmütz). Presented by G. F. Hill. [Pl. XXI.]

One of the series of fine Rhodian tetradrachms dating from about 400 to 333 B.C. The same symbol, placed with the letter Φ on the left, while the bud is on the right, is found on the specimen from the Pozzi sale (no. 2682).

⁹ See Baumeister, *Denkmäler*, iii, p. 1402. The tooling is most severe on the drapery and vase; but the whole of the surface has apparently been worked over.

¹⁰ On the whole subject, see Chr. Blinkenberg, *Den knidiske Afrodite*, esp. pp. 32f. This excellent monograph ought to be translated into a language more commonly understood than Danish.

29. *Obv.* Head of Helios radiate, facing, slightly inclined to r.

Rev. Rose, with bud on r., and **Π Ο** at sides of stalk; above **ΣΤΑΣΙΩΝ**; in field l., Asklepios standing r., resting with l. on serpent-staff. Border of large dots.

AR ↑ 28 mm. 13.47 grm. (207.9 grn.). [**Pl. XXI.**]

30. Another, generally similar, but instead of Asklepios omphalos entwined by serpent.

AR ↑ 26.5 mm. 13.40 grm. (206.8 grn.). [**Pl. XXI.**]

31. Another, with **ΑΡΙΣΤΟΒΟΥΛΟΣ** and thunderbolt.

AR ↑ 27 mm. 13.60 grm. (209.9 grn.). [**Pl. XXI.**]

These three tetradrachms, of the period 304–166 B.C., come from a hoard, of which details are not known. As regards *Aristoboulos*, he is known from didrachms (B.M.C., no. 137, symbol: ear of corn), and also (unless this is another man of the same name) as striking imitations of Alexander the Great and Lysimachus. Of *Stasion* there is a didrachm with symbol bow-in-case and club (B.M.C. 149 and Naville, iv. 914) and a drachm with symbol bow and club crossed (*ibid.* 182, 183), as well as an Alexandrine tetradrachm. Since these Rhodian imitations of Alexander and Lysimachus hardly begin before 190 B.C., it would seem that the ordinary Rhodian tetradrachms struck by the magistrates Aristoboulos and Stasion must belong to the end of the period to which this class is assigned by Head. Ameinias, on the other hand, of whom there were worn coins in the hoard, probably belongs to the earlier part of the period; he did not strike imitations of Alexander or Lysimachus.

SYRIA. Demetrius I.

32. *Obv.* Head of Demetrius r., diademed. Wreath border.

Rev. [B]ΑΣΙΛΕ[ΩΣ] on r. downwards, ΔΗΜ ΗΤΡΙ·Υ on l. downwards. Tyche seated l., holding short wand in r., cornucopie in l.; back support of the seat in form of a winged tritones; in field l., monogram ΑΥ and forepart of hound l., with pricked ears.

Α ↑ 28 mm. Wt. 16.25 grm. (250.8 grn.). From Glendining's Sale, 1 xi. 1928, lot 229. [Pl. XXI.]

The symbol is probably the same creature whose head forms the reverse of the remarkable bronze coin published in *Num. Chron.*, 1917, p. 25, Pl. III. 6 (cp. Babelon, *Rois de Syrie*, Pl. XVI. 13).

PERSIS.

33, 34. Two important coins from the Allotte de la Fuyé Collection have, thanks once more to Mr. Gulbenkian, come to enrich our series of Persis. The first (33, Pl. XXI) is a fine drachm of Bagadat I¹¹; the second (34, Pl. XXI) a tetradrachm of Autophradates I.¹² As they have been fully discussed, and the former illustrated, by Allotte de la Fuyé himself, I do no more than illustrate them here.

ALEXANDRIA. Antinoüs.

35. *Obv.* ANTINOOV on l. upwards, ΗΡΩ[OC] on r. downwards. Bust of Antinoüs r., wearing hemhem crown, shoulders draped. Border of dots.

¹¹ Allotte de la Fuyé, *Numismatique de la Perse* in *Corolla Num.*, p. 79, 1, Pl. III: B.M.C. *Arabia*, &c., p. clxiv; Sale Catal., lot 1472.

¹² Allotte de la Fuyé, *op. cit.*, p. 87, no. 20; Sale Catal., lot 1474.

Rev. Antinoüs as Hermes riding r., nude but for chlamys over shoulders and breast, carrying caduceus in r. arm; before horse's breast \perp ; below, $\perp \Theta$ Plain border.

\mathcal{A} \uparrow 23 mm. Wt. 9.23 grm. (142.4 gr.). From the Peckitt Sale. S.W.H., 21 ii. 29, lot 284. Cp. Dattari 2083 (?). Not illustrated.

With this, in the same lot, were purchased three other coins of Antinoüs; one also of year 19, \nearrow 28 mm., bust to r., rider with chlamys fluttering on rev.; the others, with bust to l., of year 21, \uparrow 28.5 mm. and \nearrow 24 mm. respectively, both with fluttering chlamys. Of these three, the first seems to correspond, in spite of its smaller size, to Dattari nos. 2081-2; the second to his no. 2090, and the third to his 2091, although the date is differently arranged.

AXUM. Ella Gabaz, Negus.

36. *Obv.* $\odot + \text{M}\Lambda\Lambda\Lambda\Gamma\text{A}\text{B}\Delta\text{C}\text{I}\Gamma$ Bust r., with low crown, r. hand holding ear of corn which goes up in front of face, while a second ear rises behind, the two meeting at the top. Thick inner and outer circles.

Rev. $\odot + \text{B}\Delta + \text{C}\text{I} + \Lambda\text{E} + \text{V}\text{C}$ Similar bust and arrangement to obverse, but for crown a sort of round cap is substituted.

\mathcal{A} \uparrow 18 mm. 1.45 grm. (22.3 grn.). Not illustrated. Cp. Anzani, *Numismatica Axumita*, 1926, no. 196.

The date of Ella Gabaz is supposed to be seventh-eighth cent.

G. F. HILL.

XII.

EGYPTIAN LEADEN TOKENS.

[SEE PLATE XXII.]

THE collection of Egyptian leaden tokens in the Ashmolean Museum has recently been increased by the acquisition of a large number obtained in Egypt by Mr. R. G. Peckitt, and these provide some important information which can be used to supplement and correct my former studies of this class of coinage in *Fayûm Towns*, 71-4; *Num. Chron.*, viii (1908), 287-310; and *Ancient Egypt* (1915), 107-20.¹ The material available is not yet sufficient to justify an attempt at a complete classification of this obscure currency; the find-spots of many of the specimens which have been described are unknown; the execution in some cases, and the preservation in others, is so bad that it is difficult to interpret the types without the aid of better examples; and examination of the actual coins is usually necessary before they can be grouped by technique, as neither illustrations nor casts are a sufficient guide. As will be seen, however, it is now possible to suggest a local attribution for one group which has hitherto been unplaced, and the opportunity may be taken to review the position in regard to others.

¹ The two latter articles, "The leaden token-coinage of Egypt under the Romans" and "Leaden tokens from Memphis" will be quoted as "L.T.C." and "L.T.M." respectively.

Mr. Peckitt has informed me that the tokens in his collection were mainly bought at Sohag, and presumably came from finds at Akhmim. They are therefore the first lot from Upper Egypt; the evidence they furnish is not of course as good as that derived from the products of scientific excavations, but it is valuable as showing what types are in the hands of the local dealers. These leaden pieces are not likely to be sent far afield to be marketed, and there is a strong presumption that any type which is common amongst those offered for sale at a particular town is one found in its neighbourhood. Thus the Peckitt collection ranks with Sir Flinders Petrie's from Memphis, which was similarly formed, and the localized evidence at our disposal now includes two series from excavations—those of the Fayûm towns and of Oxyrhynchus—and two from the markets of Memphis and Sohag.

The tokens from Oxyrhynchus give some indication of the degree to which the find-spot of a type can be used to indicate its origin. There were in all 271 specimens obtained in the excavations, of 37 different types; of these 184 belonged to 12 types which can be regarded as definitely Oxyrhynchite, having in many cases the initial letters of the name of the town on the reverse, and 56 more to 2 types which did not appear to carry any reference to Oxyrhynchus; the remaining 23 types were represented by only 31 examples in ones or twos. It is clear therefore that at Oxyrhynchus over two-thirds of the tokens in circulation were local ones, and that "outsiders" only came in casually, except perhaps in two instances, which may reasonably be assumed to be, if not from Oxyrhynchus itself, from a neighbouring town; one

of them, as will be seen later, is possibly of Herakleopolis; and it may be concluded from this that, if a type is commonly found at a particular site, it was originally issued either there or not far away.

In the Peckitt collection, the first characteristic which impressed itself on a general survey was the large proportion of specimens which belonged to the "dumpy" class—pieces generally smaller than either the named or the dated tokens, seldom of good workmanship, and bearing types not usually found on Alexandrian coins and often more Greek than Egyptian in their affinities. This class is not represented in the Oxyrhynchus finds, nor apparently in the Dattari or Lavy catalogues; there were a few examples in the Alexandria Museum when I examined the tokens there, but without any note of the find-spots; in the Petrie collection there are several, some of which I failed to identify in L.T.M. owing to their poor condition. They are so distinct in fabric that they can be treated as a separate class. The descriptions of the types follow.²

1. *Obv.* Bearded head r.

Rev. Head of griffin r. 12 mm. [Pl. XXII. 1].

Fourteen specimens: one in Petrie collection (L.T.M. G. 3).³

The bearded head on the obverse is quite unlike anything Egyptian, but is very close to the Greek

² The sizes of these tokens are very irregular; in the descriptions I have given the mean size of the examples of each type. The number of specimens is the number in the Peckitt collection.

³ In L.T.M. I described the head on the obverse as a prow; the illustration given in that article will show the difficulty of identifying these types from a single example.

type of the bearded Pan. If this, which seems the natural interpretation, is accepted, it is probable that these tokens, coming in some numbers from the neighbourhood of Akhmim, are the local issues of Panopolis, and this is a clue to the district where the "dumpy" class originated. It may be noted also that the griffin's head on the reverse is Greek, not Egyptian, in character.

2. *Obv.* Male head r., wearing crested helmet.

Rev. Owl to front. 13 mm. [Pl. XXII. 3].

Three specimens.

3. *Obv.* As 2.

Rev. Head of Athene r., helmeted. 11 mm.

One specimen. [Pl. XXII. 4].

4. *Obv.* As 2.

Rev. Similar to *obv.* 12 mm.

One specimen. [Pl. XXII. 5].

There were nine specimens in the Petrie collection (L.T.M. F. 1), all in poor preservation, some of which may belong to 3 or 4.

If a home for these three types is to be sought in the neighbourhood of Panopolis, on the ground of their fabric, the most likely identification for the helmeted male head of the obverses is that it represents Onouris of the Thinite nome, who, at any rate in the Late Empire, was essentially a warrior god; and, if this is correct, the place of issue would probably be Ptolemais Hermiou, which was in that nome. As Ptolemais was the centre of Greek influence in Upper Egypt, this would account for the Greek character of the designs; it is not clear why Athene and her owl were chosen for the reverses of 3 and 2, but there may have been a local cult at Ptolemais; it cannot well be

taken as a reference to Oxyrhynchus, where Athene appears, not as the goddess of wisdom with the owl, but as the warrior Athene-Thoeris. However, the Athene provides a link with the next type:

5. *Obv.* Head of Athene r., helmeted; b.d.

Rev. Frog, viewed from above. 11 mm.

Eight specimens. [Pl. XXII. 2].

The frog of the reverse may be another indication of Thinite origin; the frog-goddess Hekt was the consort of Shu, according to the Thinite texts, and Shu was amalgamated with Onouris. But here again the Greek artistic tradition may be noticed: an Egyptian would normally have shown the frog in profile.

Thus we have a small series of tokens, of peculiar fabric, which occur fairly often in the market at Sohag, but much more rarely at Memphis, and have not been found in the excavations at Oxyrhynchus and in the Fayûm; they have types which can be referred with probability to Panopolis and Ptolemais, both of which are near Sohag; and the Greek conception of these types suggests that they were designed where Greek influence was strong, which was the case at Ptolemais. On the evidence available at present, the attribution of 1 to Panopolis and 2, 3, 4, and 5 to Ptolemais seems reasonable.

There is a second group of issues which is well represented in the Peckitt collection, but has not occurred elsewhere, except for a few examples in the Petrie collection; these tokens are not so dumpy as those already described, but are not so spread as the types known from Middle Egypt, and are very inferior in their execution. They show the same preference

for Greek over Egyptian types—in fact, the types of two varieties seem to be imported directly from Greece, and to have no local association in Egypt, which makes it difficult to attribute them to any town.

6. *Obv.* Horse's head r., bridled; b.d.

Rev. Forepart of bull leaping r., head to front; b.d.
15 mm. [Pl. XXII. 6].

Thirty-two specimens: eleven in Petrie collection
(L.T.M. F. 2).

There is no trace of Egyptian influence in the types of this token, but they can easily be provided with parallels from Greek coins. The horse's head has rather a Carthaginian air, but other origins are possible; the bull almost certainly comes from Crete, probably from Gortyna or Phaestus. A few of the specimens are of moderate workmanship, but most are poor, and some so degraded as to be unrecognizable except by comparison with better examples.⁴

7. *Obv.* Lion's scalp; b.d.

Rev. Boar's head r. 13 mm. [Pl. XXII. 7].

Fourteen specimens (on one the boar's head is l.).

Here again the types are obviously Greek, not Egyptian; the obverse is presumably borrowed from Samos, while the reverse is another Cretan one, probably from Lyttus. The execution is almost always poor, though degradation does not go so far as in 6.

If the choice of types can be taken as a guide to the origin of these tokens, there is no likelier home for 6 and 7 than Ptolemais; there were probably

⁴ The work is usually so bad that I did not recognize the animal on the reverse of the Petrie specimens as a bull, and called it a horse.

Cretan and Samian elements in the original population of the town, as a good many settlers from those islands occur in Egypt in Ptolemaic times, and the tradition of the ancient badges of their homes may have lingered in some families even for five centuries; curious survivals of this kind can be found in the Roman period in Egypt at a still later date.

8. *Obv.* Female figure seated to front on cushion (?), apparently nude, with hands clasped under breasts.

Rev. Cloaked figure, probably male, standing r., leaning on staff. 15 mm. [Pl. XXII. 8].

Fifteen specimens: one in Petrie collection (L.T.M., G, unidentified).

The reverse type is a puzzle, but looks Greek; the obverse, however, can hardly be meant for anyone but Aphrodite, and the token may be ascribed to Aphroditopolis, the capital of the nome next to the Panopolite. The execution is very poor, and the degradation goes quite as far as in 6.

9. *Obv.* Winged boy, nude, standing l., stooping forward with hand outstretched towards a bird (?); b.d.

Rev. Hippocamp r. 14 mm. [Pl. XXII. 9].

Twenty specimens: eight in Petrie collection (L.T.M., E. 15 and J).⁵

The winged boy is presumably Eros, and this token can therefore be referred, like the last, to Aphroditopolis. The origin of the reverse type is not clear, but it is fairly obvious that the designer of it had never seen a hippocamp; the head is rather like an elongated head of a hippopotamus, the tail is that of an eel.

There is one more token of which there were several

⁵ In L.T.M. the hippocamp is wrongly described as a bird, and turned upside down in the illustration.

examples in the Peckitt collection, but which does not seem to have been recorded elsewhere.

10. *Obv.* Bust of Harpocrates r., head to front, crowned with skhent, hand pointing to mouth; b.d.
Rev. Stag standing r.; b.d. 14 mm. [PL XXII. 10].
Nine specimens.

The fabric of this token is similar to that of the last group rather than to that of the Middle Egyptian, but the types do not show the distinctively Greek influence which has been taken above as characteristic of the district near Ptolemais. It might perhaps be ascribed to Koptos, as the stag is a reverse type of the coins of the Koptite nome, and Harpocrates is quite a likely choice for Koptos; there is no evidence of any Greek tradition there in Roman times. If this ascription is correct, this token comes from a point higher up the valley than any token yet localized.

The ten varieties described are those specially characteristic of the collection, and form its most important addition to our knowledge, as showing the class of tokens which circulated in the part of Upper Egypt north of Thebes. But there are some isolated specimens, which, if they were acquired at Sohag, may have drifted there from a distance, and should be noted; and for convenience the tokens of the fabric which I regard as Middle Egyptian, apparently characteristic of the Heptanomis and Memphis, may be considered in three sections—those with local names, those with dates, and those without any inscription.

At present, only four towns are definitely known to have placed their names on leaden tokens—Memphis, Oxyrhynchus, Arsinoe (Fayûm), and Athribis; the last

really belongs to the Delta, and its tokens approximate in style to the Delta group, but it may be included here.⁶

The Memphis tokens were described at length in L.T.M., and the only point to be added is that specimens in good preservation show that Isis-Hekate, on the reverse, has her left arm round the neck of the Apis-bull. [Pl. XXII. 19]. There were only two named pieces of Memphis in the Peckitt collection. There were some specimens of the well-known issues of Oxyrhynchus, as there were also in the Petrie collection from Memphis, but they did not show any variations from the types catalogued in L.T.C.

Neither collection had any Arsinoite tokens, but this is not surprising, since the use of tokens in the Fayûm seems to have been much more limited than in the Heptanomis; so far as I am aware, the only specimens of any kind recorded as found in excavations in the Fayûm are two each at Euhemeria, Theadelphia, and Philoteris; and the varieties with the name of the city of Arsinoe are at most three: one at Paris, described as no. 680 in Rostovtzeff and Prou's Catalogue of 1900 (there is also a specimen of this in the Ashmolean); and probably the token described on p. 72 of *Fayûm Towns*, and Dattari 6423, in both of which the restoration of the mutilated legend on the reverse as **APCINOITΩNΠΟΛΕΩC** is almost certain. The scarcity of leaden tokens in the Fayûm may be connected with the fact that in the

⁶ It is not clear to what place, if any, Dattari 6422 and L.T.C. no. 35 can be referred. Dattari 6412 may be of Antaeopolis. Dattari 6413 is not a token.

third century A. D., to which this coinage mainly belongs, payments in the Fayûm were frequently made in kind; on one large estate, as Rostovtzeff has pointed out, wine was the chief currency, and similar instances of the use of corn and oil could be collected; under these circumstances, there would not be much need for small change in the form of coins or tokens.

A specimen of the named token of Athribis in the Peckitt collection is in good condition and makes it possible to amplify Dattari's description of his no. 6415 in some important points. The types are:

Obv. Nilus seated l. on rocks, himation over legs, holding in r. reed upright, in l. cornucopiae, l. elbow resting on hippopotamus.

Rev. ΔΑΘΡΙ ΖΒΙC Horus standing to front, hawk-headed, head l., wearing cuirass, holding out on r. hawk r., resting l. on spear. [Pl. XXII. 20].

It should be noted that the Nilus type of the obverse here is not the reclining Nilus of the dated tokens.

The fresh specimens of dated tokens serve to confirm the view taken in L.T.M. that these pieces are of Middle Egyptian origin, and possibly of a semi-official character; they have an air of government authority given them by the date on the reverse; they are of fairly uniform size and fabric, and as a rule better executed than the tokens of other classes; the types used are seldom definitely local ones, the obverse being nearly always Nilus, and the reverses such generally popular figures as Euthenia, Sarapis, Isis, and Harpokrates; and they are found at several Roman sites on the Nile, without any marked preference for a particular variety at any spot. The tokens with names of towns, on the other hand, are not dated; on

these the name seems to take the place of the date as the guarantee under which the piece was issued. If a centre for the distribution of the dated tokens is to be sought, the likeliest would seem to be either Antinoopolis, as suggested in L.T.M., or the neighbouring town of Hermopolis; of deities other than those already named who appear on published varieties of the dated tokens, the only one who occurs more than twice is Hermes; there are at least six types of, or connected with, Hermes known in this group. And, if they come from Hermopolis, a reason may be found for the choice of Nilus as the normal obverse type. Hermopolis was the point where tolls were collected on goods passing between Upper and Middle Egypt, and the custom-house officials would probably require to be well supplied with small change. When this change was provided for them in the form of leaden tokens, it was natural enough that, being concerned mainly with river-borne traffic, they should have the figure of the river-god placed on these tokens.

Amongst the uninscribed pieces there is a fair amount of new material; and, as these often have interesting, and presumably local, types, though it is not always possible to suggest the place of their origin, it is worth while to group together, even tentatively, those examples which can be linked by any common characteristics, as a basis for further investigation when fresh evidence is available. In some instances, as Dattari pointed out, the types on the obverse and reverse of a token are those of two different towns, according to the ordinary usage; and this might conceivably mean that such a token was issued on the joint authority of the two towns. But

such a proceeding would only be likely in the case of two neighbouring places, and in most cases the towns—e.g. Bubastis and Herakleopolis (D. 6428), Bubastis and Panopolis (D. 6429, 6430), Hermopolis and Herakleopolis (D. 6431)—are too far apart to suit this theory. It is more probable that the town which issued the token borrowed the type of the other as a compliment, very much on the same principle as in the "Homonoia" coins of many cities in Asia Minor; in such a case distance did not matter. A slightly different method of combining types will be mentioned later.

As an experiment in such grouping, a collection was made in L.T.M. of the tokens which might be attributed to Hermopolis, on account of their allusions to Hermes, Hermanubis, or Thoth, and some additions can now be made to this list.

11. *Obv.* Hermes standing l., chlamys over l. arm, holding purse in r. hand, caduceus in l.; b.d.

Rev. Athene standing r., resting l. hand on shield, facing Demeter standing l.; b.d. 16 mm. [Pl. XXII. 11].

The obverse of this token is very similar to that of L.T.M., C. 4 and 5; like these it is only of moderate execution.

12. *Obv.* Thoth standing l., wearing long robe, r. hand raised, cornucopiae on l. arm; to l., ibis standing l.; b.d.

Rev. Man standing r., wearing pointed cap and short chiton, with sickle in r. hand cutting three stalks of corn held in l.; b.d. 23 mm. [Pl. XXII. 12].

The obverse may be compared with that of L.T.M.,

C. 3.⁷ The reaper-reverse is found on a Nilus dated token from Oxyrhynchus (L.T.C. no. 24), on Dattari 6491 with *obv.* busts of Nilus and Euthenia, and on Dattari 6546, which also occurred at Oxyrhynchus (L.T.C. no. 34), the details being slightly varied in each case; it is derived from a coin of the fifth year of Antoninus Pius.

13. *Obv.* Hermanubis standing to front, wearing long robe, r. hand on hip, caduceus in l.; b.d.

Rev. Figure with baboon's head seated l., crowned with disk, wearing long robe, holding purse in r. hand, resting l. on sceptre; b.d. 14 mm. [Pl. XXII. 13].

Both the types here are unusual; the obverse is almost certainly Hermanubis, the reverse is probably Thoth-Hermes, the only attribute belonging to the Greek side of the conception being the purse. The workmanship is fair.

14. *Obv.* Head of Ammon r., horned, crowned with disk, on boat; above, to r., head of ibis l.; b.d.

Rev. Hermanubis standing to front, head l., crowned with modius, resting r. hand on rudder, holding caduceus in l.; b.d. 14 mm. [Pl. XXII. 14].

These again are novel types, and interesting in view of the suggestion already made that there may be a connexion between the custom-house on the river at Hermopolis and the issue of tokens there. The head of the ibis on the obverse and Hermanubis on the reverse link this token with Hermopolis; but an allusion to shipping may be seen in the boat on which the head of Ammon is placed and the rudder in the

⁷ The figure on the obverse is probably Thoth rather than Hermanubis.

hand of Hermanubis. This token, like the last, is of fairly good work.

L.T.C. no. 36 may also be Hermopolite. Thus, combining the lists in L.T.M. and here, we have a score of tokens which might belong to this group; whether the attribution is correct or not could be tested if a scientific investigation of the Roman strata at Ashmunên were ever possible.

On similar principles an attempt may be made to collect the tokens referable to the town of Herakleopolis; unfortunately the finds from Wilcken's examination of the mounds there in 1899, which might have supplied a firm basis for the identification of the local issues, were lost in a fire on the ship which brought them to Germany. However, some of the types give a fairly definite clue.

15. *Obv.* Bust of Sarapis r., wearing modius and draped; to r., star, to l., crescent, below, globe; b.d.

Rev. Male figure standing r., crowned with Atef-crown, wearing long robe, holding in both hands spear transversely, point downwards; to r., Nike flying l., holding wreath; to l., griffin seated r., l. paw on wheel; b.d. 15 mm. [Pl. XXII. 15].

The figure on the reverse is probably the local god Harsaphes, a warrior form of Horus; the seated griffin is the regular badge of Herakleopolis on the nome-coins. The same obverse type is found on Dattari 6527, with reverse type Sarapis standing to front, head r., with r. hand raised, between a griffin r. and a baboon l.; here also the griffin indicates Herakleopolis, while the baboon may be a compliment to Hermopolis. Two tokens with similar obverses can be brought into connexion with these.

16. *Obv.* As 15, but no globe.

Rev. Bust of hawk-headed deity r., crowned with Atef-crown, wearing cuirass; b.d. 21 mm. [Pl. XXII. 16].

The bust on the reverse of this token presumably is of Harsaphes.

17. *Obv.* As 16, but no crescent.

Rev. Two androsphinxes couched r. and l. on bases, facing; b.d. 13 mm. [Pl. XXII. 17].

The Herakleopolite origin of this token can only be inferred from the similarity of the obverse to that of 15 and 16; but it seems to be related to Dattari 6536, where, on the obverse, there is a standing Sarapis with a crescent in the field, and on the reverse a distyle portico flanked by the two androsphinxes of 17.

Another token which may belong to Herakleopolis is L.T.C. no. 15, with its variant no. 16, where the obverse type is a warrior holding Nike and resting on a spear, the reverse Nike; the obverse would be suitable for Harsaphes. These were fairly common at Oxyrhynchus, twelve specimens of no. 15 and two of no. 16 having been found; one of the latter also occurred at Memphis (L.T.M., E. 6). But it would not be surprising that tokens of Herakleopolis should have found their way freely to Oxyrhynchus, since the evidence of papyri suggests that there was a considerable business connexion between the towns.

It is probably Harsaphes also who is represented on the obverse of L.T.C. nos. 10 and 11; in the original publication the figure was wrongly described as Athene, but further examination shows it to be hawk-headed and wearing a cuirass, which links it with the types already discussed; the reverse of no. 10 is Nike,

of no. 11 Eusebeia or possibly Euthenia. With these should go L.T.M., E. 16, which has a similar hawk-headed warrior and, on the reverse, a shrine; here in front of the warrior is a serpent erect, which may be another instance of a complimentary introduction into a nome-type of a reference to a deity of another nome, like those already discussed; there is no cult known at Herakleopolis with which a serpent was associated, but there was an important serpent-worship not far up the valley at Cusae.

Many varieties of the tokens of the Middle Egyptian class cannot at present be fitted into groups, and may have to wait for further evidence to show their relationships. There are also some, of very distinct style, which I have previously suggested may belong to the Delta; these are not struck, as the Middle Egyptian pieces generally seem to be, but obviously cast; and the workmanship is always crude, with simple types. Two of the commoner varieties I referred in L.T.C. to Hermopolis Magna and Sais respectively, correcting the attribution of the former in L.T.M., on grounds of style, to Hermopolis Parva; and these are the most satisfactory identifications on the evidence available. A variety of the Hermopolis token has come to light which deserves description.

18. *Obv.* Head of Ammon r., horned.

Rev. Half-length bust of baboon l., supported by two serpents curved outwards r. and l.; line border.
16 mm. [Pl. XXII. 18].

Unfortunately there is no localized information whatever as to finds of this class on Delta sites, and the attribution is purely conjectural.

J. G. MILNE.

XIII.
THE FORLORN HOPE MEDAL OF
CHARLES I

[SEE PLATE XXIII.]



THE Forlorn Hope Medal has always been somewhat of a puzzle to students of seventeenth century badges, because no specimen has come down to us bearing in the field any inscription relating to the services which had entitled the recipient to this reward. Moreover, excepting in the field there is no place for such inscription on the beautiful medal

which we have been accustomed to call by that name, for the King's effigy occupies one side and that of Prince Charles the other.¹ [Pl. XXIII. 1.] The gold medal given to Sir Robert Welch, sometimes spelt Walsh, in June 1643, bore on the reverse a special design, the royal standard retaken by him from the enemy at great personal risk at the battle of Edgehill in the previous October, whilst the obverse bore a jugate portrait of King Charles and his son.² This medal in its entirety is unknown to us contemporaneously cast, but owing to Sir Robert having registered his arms at the Heralds' College some time after the Restoration to avoid a poll-tax, an exact picture of the original decoration is preserved.³ The jugate portrait was no doubt made in honour of the young Prince's presence at the battle of Edgehill, or to keep before the King's subjects the fact that the boy's fortunes were bound up with his own.

It seems clear from the wording of the warrant addressed to Thomas Rawlins on June 1, 1643, that the obverse was already in existence and only the special reverse with the "Royal Banner" was still "to insculp".

¹ *Medallic Illustrations of British History*, vol. i, p. 301, no. 122; Hks. MS. Charles I, no. 24.

² *Med. Ill.*, vol. i, p. 302, no. 124, *Num. Chron.*, 1852, vol. xiv (xiii), Pt. V. 38.

³ The medal was ordered at Oxford on June 1, 1643, and the Grant of Arms was registered on August 14, 1685. See also *Num. Chron.*, 1853, vol. xv, pp. 80-81, where both documents are printed and the medal on the Grant of Arms is illustrated. I have compared the illustration with the original at the College of Arms, and excepting a few minor printer's errors found little to correct but the engraving in the sketch on the Grant shows finer work. See College of Arms, MS. I. 26, fol. 90.

Had it not been so obvious that only a uniface design could form the basis of the presentation to Welch, it might have been a matter of surprise that so poor a portrait should have been chosen, when we had been led to believe that the so-called "Forlorn Hope" medallion, with its idealized presentments of father and son was already extant. But let us glance at the chronology of the various badges and we may reasonably conclude that the obverse of Welch's medal [Pl. XXIII. 2], known as the Military Reward⁴, was made earlier for a special need, whereas the precise date of the more beautiful medallion, is, as we shall see, still in doubt.

I have lately been able to produce evidence that on January 23, 1642-3, Charles I wrote to the Wardens of the Oxford Mint, ordering medals to be struck in gold to be presented, as he said, to "our true hearted Subjects from Our County of SALOP".⁵ "We have therefore caused", wrote the king, "Our Owne Royall Image and that of Our dearest Sonne Prince Charles to be impressed on a Medall of Gold and a Commemoration of his well deservings, to whom it is designed to be inscribed on the Reverse, whereby his Posterity may assume the Glory That their Ancestor stood Loyall to their Sovereigne when the Malignity of Rebellion had neare covered the face of this flourishing Kingdom." It is noticeable that the description is almost identical with that in the warrant of

⁴ *Med. Ill.*, vol. i, p. 302, no. 123. Hks. MS. Charles I, 26.

⁵ *The Shrewsbury Medal*, British Numismatic Journal, vol. xviii, pp. 125, 134. Proclamation printed at Shrewsbury, vol. i, p. 477 at the Privy Council Office and *Wentworth Proclamations*, no. 4. This volume has been recently presented to the Bodleian Library and is there catalogued under the head of *Royal Proclamations, 1642-43*, Wentworth Collection i, Don. b. 4.

June 1643, and that the jugate portrait was equally necessary in both cases to allow of a special reverse.

At the very beginning of the Civil War, just as the Mint was on the move from Shrewsbury, it was but natural that Thomas Rawlins, who was young and not yet very familiar with the royal features, should in this hurried dual portrait be less successful than he afterwards became. But he boldly affixed his initial R between two crosses as signature upon this early effort, and the King must have been satisfied with the design, as we hope to show. Be this as it may, it seems highly probable although "not proven" that this obverse was originally made to recompense the "well deservings" of the Shropshire gentry, who had flocked to the King's standard and "risked their all for their Fidelity to their Prince and country" whilst the picture heading the Grant of Arms to Robert Welch absolutely proves that this design was utilized to commemorate his "acceptable service" in rescuing the royal standard and other feats of arms at Edgehill.

But to come to the Forlorn Hope, a name which might fairly be given to the exploit of Welch and his companion in arms John Smith, who assisted in the recapture of the standard and received a similar medal.⁶ Intermediate, in point of time, between the warrant for the medal for the County of Salop and the award to Welch and Smith, we have the order under date

⁶ See *Bulstrode's Memoires*, p. 83. Also *Britannicæ Virtutis Imago*, the life of Sir John Smith by E.W. (Edward Walsingham) *Thomason Tracts*, E. 53. 10, and *True Narrative and Manifest set forth by Sir Robert Welch* (final page), 1679. Sir Robert in his narrative, p. 20, also mentions another Smith, Colonel *Paul Smith* of Wilmot's troop, who led a "Forlorn hope" with a hundred men at Roundway Down on July 13, 1643.

18th May, 1643, for a special reward for those who should "lead up in a Forlorne-hope."

This document has long been known to us through the pages of the *Num. Chron.*⁷ in an article from the pen of the distinguished antiquary, Mr. Edward Hawkins. A silver medal was to be worn "on the breast of every man, who shall be certified under the hands of their Commanders in chiefe to have done us faithful service in the Forlorne-hope." Again, we find the same instructions about the design as "containing our Royall Image and that of Our dearest Sonne, Prince Charles", but nothing is said about the reverse, the Wardens of the Mint being merely enjoined "to keep severall Registers of the names of those, and of their Country, for whom they shall give their certificates."

What then was the type of this Forlorn Hope Medal? When Mr. Edward Hawkins published in 1852 in the *Num. Chron.*, the list of his private collection, he had strong, and as he thought adequate, reason to believe that the badge was no other than the beautiful double medallion in high relief, showing the busts of Charles I and his son on opposite sides.⁸

Recently, however, by the kind co-operation of my friend, Mrs. Reginald Poole, in her researches for me at the Bodleian Library, and my own rather interrupted examination of Lord Crawford's splendid

⁷ *Num. Chron.*, vol. xiv (1852), pp. 40, 41.

⁸ *Med. Ill.*, vol. i, p. 301, no. 122. I give the numbers and reference to the book in modern use rather than the old numbering of the Chronicle or Mr. Hawkins's private Manuscript of which this is vol. ii, 25. This collection of medals was later purchased by the Trustees of the British Museum in 1860, seven years before the death of the collector.

Bibliography of the Tudor and Stuart Proclamations, I came upon evidence to the contrary, which although clearly presented therein by the able editorship of Mr. Robert Steele, appears to have escaped the notice of many students of seventeenth-century medals.⁹

But we must go back to the *Num. Chron.* of 1852, when Mr. Hawkins illustrated the badge portraying the King on the obverse and the Prince on the reverse, and stated his reasons for considering this extremely rare medal to be that conferred on the leader of a Forlorn Hope.¹⁰

The story related was that the badge was offered to Mr. Young, a well-known numismatist of the early nineteenth century, by a "stranger", accompanied by a "document" of which Mr. Hawkins printed a copy. This document was a letter or warrant from Charles I ordering Parkhurst and Bushell at the Oxford Mint "to provide from time to time certain Badges of silver containing Our Royall Image and that of Our dearest Sonne Prince Charles to be delivered to weare on the breast of every man, who shall be certified under the hands of their Commanders-in-chiefe to have done us faithfull service in the Forlorne hope." It was said that the badge and manuscript had belonged to one and the same person, but the name of the original owner was not given, neither did the mysterious stranger give his own name. But it appeared that Mr. Young had confidence in the man and purchased

⁹ *Tudor and Stuart Proclamations* in two volumes, published in 1910, being vols. v and vi of *Bibliotheca Lindesiana* of the Earl of Crawford and Balcarres.

¹⁰ *Num. Chron.*, 1851, vol. xiii, p. 191, Pl. V. 37, vol. xiv, p. 40, no. 69, see description also *Med. Ill.*, vol. i, p. 301, no. 122.

from him not only this, but other medals, some of which passed into the collection of Mr. Dimsdale. At the latter's sale, in July, 1824, lot 388, the medal with the King's bust in high relief on the obverse and that of the young Prince on the reverse, together with the manuscript describing the Forlorn Hope award, fell for £6 6s. to Mr. Hawkins "after" as he tells us in his private manuscript notes "a smart contest". Mr. Hawkins naturally was content to believe the "document" had acted as the "certificate" demanded in the warrant, and that it, together with the badge, had belonged to one and the same hero of the Civil War. The bust of the King, it is true, being in high relief is not very suitable to rough usage as a war medal and seems more in its place in its only other known form, cast with a hollow back and probably intended for the ornamentation of a box or book-cover.¹¹ The portrait of the younger Charles is a slightly reduced version on the part of Rawlins of a charming uniface medallion, now in the Ashmolean Museum, but for many years in the Bodleian Library.¹² [Pl. XIII. 5.] What became of the manuscript sold with the attractive double effigies in lot 388 of the Dimsdale Sale? In spite of the kind co-operation of the

¹¹ *Med. Ill.*, vol. i, p. 368, no. 253. This specimen was purchased by Mr. Hawkins in the Dimsdale sale lot 391 together with a badge of Prince Charles with royal arms on the reverse. *Med. Ill.*, vol. i, p. 372, no. 263. Hks. MSS. Charles I, no. 25.

¹² *Med. Ill.*, vol. i, p. 371, no. 262. Three specimens are known to exist of this larger medallion. That at Oxford is signed by Rawlins [Pl. XXIII. 5]. That in Mr. Hawkins's collection, Charles I, 32, illustrated *Med. Ill.*, Pl. XXXIII, no. 13 (second edition), and one bequeathed by Colonel Croft Lyons to the Victoria and Albert Museum are unsigned.

heirs of Mr. Hawkins, we are unable to trace it. It is not in the collection of Mr. Hawkins's manuscript notes, which were presented in 1914 by his grandson, Sir Frederic Kenyon, to the Department of Coins and Medals, British Museum. These valuable notes contain only a copy in the collector's own handwriting and Sir Frederic's courteous efforts to trace the original document have been of no avail. I had been privileged to examine these very interesting manuscript notes in order to check any slight printer's errors which might have crept into the *Num. Chron.*, just as I had done with those referring to Welch at the Heralds' College, but in this instance I found only some details of little importance in capital letters and spelling to revise. But seeing that the article had been quoted and requoted with slight variations in all medallic histories,¹³ I welcomed the information contained in the first volume of Lord Crawford's *Bibliography of Proclamations*, under the head of no. 2425, that "a Brief ordering badges in a Forlorn Hope" could be seen in an original version, printed at Oxford, on May 18, 1643, and was to be found in the Bodleian Library. Unable at the moment to visit the University, I asked my friend Mrs. Poole to check my copy of the document taken direct from the Hawkins manuscript notes. The problem of many years standing was at once solved, for "King Charles's

¹³ Naturally the editors of *Medallic Illustrations*, publishing from Mr. Hawkins's abstract of his own notes in 1885 and 1905, saw no reason to doubt the conclusions of so careful an antiquary, and we have copies also derived from Mr. Hawkins in Nicholas Harris Nicolas's *Orders of Knighthood*, vol. iv, *History of Medals*, p. 6, and also more modern books such as Sir John Scott's *History of Medals*, and various others.

letter" at the Bodleian is headed by a woodcut of the jugate obverse of the *Military Reward* conferred on Sir Robert Welch and Sir John Smith for rescuing the standard¹⁴; the woodcut is reproduced in actual size at the beginning of this article.

By the courtesy of Bodley's Librarian, I am able to illustrate on the opposite page a photograph of this document.¹⁵ It formed part of the collection of Thomas Barlow, Bishop of Lincoln in 1675, who had previously occupied the post of Bodley's Librarian from 1652 to 1660 and was Provost of Queen's College in 1657. He seems, moreover, to have been resident in Oxford in 1642-3 and probably kept the "Brief" from the time of its issue, so that its authenticity is not questionable. The jugate portrait must therefore now take rank as the Forlorn Hope Medal. [PL. XXIII. 5.]

On again referring to Lord Crawford's invaluable bibliography to see whether any other examples of the King's letter were noted, apart from the manuscript copied by Mr. Hawkins in the *Num. Chron.*, I found to my shame that I had overlooked a note from Mr. Steele calling attention to the presence of this woodcut, of which he wrote "it contributes materially to settling the identity of the Forlorn Hope Medal". Turning then to a Supplement at the end of the next volume¹⁶ I found amongst the headings of various proclamations

¹⁴ *Med. Ill.*, vol. i, p. 302, no. 123. This badge is a thin shell intended to be mounted with differing reverses. Examples are in the Museum both unmounted and with two pieces of the same design mounted back to back.

¹⁵ Bodl. c. 13. 15 Line (7).

¹⁶ Volume i concerns the English Proclamations, and the supplement giving the illustrations is in vol. ii, mainly occupied with Scottish and Irish matters.

CHARLES
R.CHARLES
P.
*and by Charles
his son*


THUS RUSTY and well-beloved We greet you well. Whereas We have received information that those Souldiers which have been forward to serve Us in the Forlorn hope, are not looked upon according to their merited Valour and Loyall service: We doe therefore require, that from hence forward the Commanders in chiefe, both of Horse and Foote which lead up the Forlorn-hope, upon whom also We mean to bestow speciall tokens of Our Princely favour, doe signify in writing the names of those souldiers whom they find most forward in serving Us their King, and Country, that care may be taken to reward their deservings, and make them specially known to all Our good Subjects; For which end we have thought fit to require Sir William Parburyt Knight, and Thomas Bulbell, Esquire, Wardens of Our Mint, to provide from time to time certain Badges of Silver, containing Our Royall Images, and that of Our dearest sonne Prince Charles, to be delivered to weare on the breast of every man who shall be cerubed under the hands of their Commanders in chiefe to have done us faithfull service in the Forlorn-hope. And we doe therefore most straitly command, That no Souldier at any time doe sell, nor any of Our Subjects presume to buy or weare any of these said Badges, other then they, to whom we shall give the same, and that under such paine and punishment as Our Councell of Warre shall think fitt to inflict, if any shall presume to offend against this Our Royall command. And We farther require the said Commanders and Wardens of Our Mint, to keep severall Registers of the names of those, and of their Country, to whom they shall give their Certificats. Given at Our Court at OX FORD, the Eighteenth day of May. 1643.

To Our Trusty and well-beloved Sir WILLIAM
PARBURYT Knight, and THOMAS BUL-
BELLE Esquire, Wardens of Our Mint at
Oxford

an illustration (37 A) of the jugate busts. But it is never too late to mend, and fearing that others, like myself, had overlooked the information within their reach, I have sought the hospitality of the *Chronicle's* pages, hoping to clear up a mystery which for more than 100 years has hung about the medal of the "Forlorn Hope".

Before concluding may I suggest a way in which the error may be explained. It is obvious that the manuscript cannot have had a pictured heading. It is also certain in the light of all we now know that before the badges came into the hands of Mr. Hawkins, nay, possibly before they reached those of Mr. Young from the mysterious stranger, the medals were mixed and the manuscript was attached to the wrong badge, namely to that representing the King and Prince on opposite sides instead of to the jugate shell.

Mr. Hawkins, as we have seen, obtained not only the medal, which he deemed to be the Forlorn Hope, with its manuscript at the Dimsdale sale, but several others, most of which he considered commemorative of the Battle of Edgehill. He was especially pleased with lot 389, on the reverse of which Prince Charles appears on horseback in complete armour,¹⁷ [Pl. XXIII. 4] and his diagnosis of this badge, as an Edgehill medal, has been corroborated of late years by the discovery of a portrait representing Sir Thomas Tyldesley wearing his badge upon a chain with the equestrian figure uppermost.¹⁸ He had raised a troop for the King and greatly

¹⁷ *Med. III.*, vol. i, p. 299, no. 119. Hks. MS. Charles I, no. 23.

¹⁸ Now in the National Portrait Gallery. See *Burlington Magazine*, June 1911, p. 163. Sir Thomas died fighting for Prince Charles in 1651. He would naturally turn the reverse towards the spectator to differentiate the medal from others bearing the bust of the King on the obverse.

distinguished himself in that battle. But this medal, although of great interest, has a fairly complete pedigree and does not appear to have passed through the hands of the mysterious stranger.

The Dimsdale Sale, lot 514, also acquired by Mr. Hawkins, comprised two specimens, of which one was the exceedingly rare badge showing the King in Official Robes, copied from a picture by Vandyck which unfortunately perished in the Whitehall fire of 1697.¹⁹ The reverse has a spirited presentment of Charles I on horseback, and the whole symbolical of his declaration of his desire to defend the laws of the Country. [Pl. XXIII. 3.]

The other badge [Pl. XXIII. 2] in this lot was a silver gilt example of the Military Reward Medal, *Med. III.*, vol. I, p. 302, no. 123, composed of two thin plates soldered together, no other, indeed, than the medal figured at the head of the "Brief", Bodl. C 13-15, Linc 7, concerning the Forlorn Hope. This lot 514 has no bibliography attached to it beyond the fact of its acquisition at the Dimsdale sale with the others mentioned through Mr. Young.

But the unintentional error in cataloguing the manuscript to the wrong medal, although it may lie with Mr. Young must be antecedent to the sale by him of the two medals to Mr. Dimsdale, and it seems likely that even the "stranger" may have acted in good faith. The original owner, of nearly 300 years ago, may have been possessed of several decorations. We

¹⁹ This picture has been many times copied and is best known by Lely's rendering in the Dresden Gallery, by some considered to be a replica by the original artist. *Med. III.*, vol. i, p. 298, No. 118. Hks. MS. Charles I, 68, no. 514 in the Dimsdale Sale.

have seen that Sir Thomas Tyldesley wore his medal as troop commander and it becomes more and more apparent that before the days of settled uniform, whilst Cavalier and Parliamentarian raised their own companies, colours were donned either in the form of a scarf or a ribbon from which the medal was suspended. Bulstrode says that Smith wore his on a broad green watered silk across his shoulders and that Welch did the same, but the latter particularly states that the recipient might wear it upon any colour he pleased, and at one time he seems to have worn it upon blue.²⁰ This was obviously a matter of regimental colours, Smith being of Grandison's horse and Welch at the time of the battle in Wilmot's troop. If, then, the winner of a Forlorn Hope had other regimental badges his descendants might easily mistake their identity. It is even possible that the hero of the Forlorn Hope was also the recipient of a royal gift of friendship, such as this best work of Rawlins, which has always seemed to me, speaking with all diffidence, to be a *pièce de plaisir* such as might be issued more at the artist's leisure, rather than in the first six months of the Civil War mints, when the coinage was an even more pressing necessity than a regimental badge.

The fact that the original and rather larger medalion now in the Ashmolean Museum (PL. XXIII. 5), bears the Prince's title as ILLVST: CAROLI MAG: BRIT: PRINC: DVC: CORNVB, perhaps suggests that it was executed in 1644-5 in honour of his intended departure, in his fifteenth year, to represent his

²⁰ Welch's Narrative, Preface.

father in the West. On the other hand this does not really date the medallion, for the title of *Duke of Cornwall* has been assumed at birth by the eldest son of the English kings, from the time that the Duchy was conferred by Edward III on the Black Prince. Charles is frequently mentioned by Clarendon and other contemporary writers as "the Prince of Wales", but this title had not been officially bestowed upon him, and he was usually spoken of as "The Prince". When about to start for the West of England in February 1644-5, whither he betook himself on March 4, he was created Generalissimo at the instance of Prince Rupert, but no reference is made on the medallion to this new rank. The portrait is perhaps rather too young in appearance for a lad of fourteen. Moreover, the legend is not seen on the badges as would have been the case had they been made in compliment to the Duchy of Cornwall.

Be the date of the medal early or late one cannot but feel that, throughout the struggle, those who fought for the King against his enemies were indeed leaders of a Forlorn Hope, and those who bravely threw all into the scale on his behalf might well deserve the gift of his likeness in its most attractive form. To me it seems almost sacrilege to rob the badge of its title of honour, the Forlorn Hope.

HELEN FARQUHAR.

XIV.

BRITANNICUS AND TITUS.

THE sestertius of Britannicus is one of those coins which we must be content to know from a few specimens in museums. Our own specimen in the British Museum is of the poorest—but for that very reason, above suspicion. Paris has a second specimen, another is in a private collection in Sofia, a third was in the Martinetti Sale of 1907. I have heard of yet another offered for sale in Rome, which English collectors see and admire—and turn away. The coin then is excessively rare and, as such, rouses our interest and curiosity. In the first volume of the B.M. Catalogue of Imperial Coins I have repeated an ingenious theory about the origin of this coin,—due, I believe, like most theories on Roman history, to Mommsen. Britannicus, we know, had a following in the state, who preferred him to Claudius's adopted son, Nero, and resented his being ousted by the latter. Our sestertius is a manifesto by this party, acting through the senate and its coinage,—no doubt relying on the natural affection of Claudius for his own son. The rarity of the issue is due to the fact that all demonstrations in favour of Britannicus were nipped in the bud. An attractive and interesting theory—but is it true? That supporters of Britannicus in the senate should have secured the striking of a coin in his name is indeed credible; that it is probable we can hardly say. To judge from the narrative of

Tacitus, Agrippina kept a tight hold on the reins and was never directly challenged during Claudius's lifetime. And did the senate issue its coins without consulting the Emperor as to his wishes? Probably not, although such consultation might be unofficial. Claudius certainly wavered in his obedience to Agrippina's ambitious schemes for the young Nero; but again we find it hard to believe that he went so far as to countenance a demonstration on the part of the senate against the new heir. These arguments, however, are all based on greater or lesser probability—and, as such, indecisive. Stronger is the argument from the coins themselves. So far as we can judge, all the "Aes" coinage of Claudius's reign belongs to the early years of the reign, A.D. 41–4, or a little later. The very rare "Aes" coins of Agrippina II and Nero seem definitely to be from some mint other than Rome. If the senatorial mint, then, was not working in A.D. 53–4, there is a real objection to the attribution of this rare sestertius to that time. Is there, then, an alternative view? I think there is. Titus, we read in Suetonius, "was brought up at court with Britannicus, and educated in the same subjects and by the same masters. They tell how a phrenologist, called in by Narcissus, the freedman of Claudius, to look at Britannicus, asserted with confidence that he would never be emperor, but that Titus, who happened to be standing by him, undoubtedly would. They were so intimate that Titus is supposed, as Britannicus's neighbour at the feast, to have tasted the cup of poison, of which Britannicus died, and to have incurred a serious illness in consequence. Later, in memory of this old friendship, he set up a golden

statue to him in the Palace, and dedicated and followed another ivory one on horseback, which is still carried in the Circus procession." Titus then had an interest in Britannicus, which he still retained as emperor. Now in A.D. 80 Titus, or rather the senate for him, issued a restored series of coins of earlier princes, from Augustus to Galba. While the disgraces to the imperial line, such as Caligula and Nero, were omitted, nearly all of its members who had enjoyed any degree of publicity and had left an honourable memory were included. Even Tiberius found a place, his solid merits outweighing his real or supposed vices. In such a list we might well expect Titus to include the friend of his youth, Britannicus—but for the one serious objection that there was no original of Britannicus to restore. This, however, was no fatal objection—a posthumous coin could be struck for him, as for Agrippa by Tiberius or Caligula, or by Claudius for Nero Drusus. The title of Britannicus on the obverse runs **TI CLAVDIVS CAESAR AVG. F. BRITANNICVS**; if this coin was really struck under Titus, ought we not to read **DIVI AVG. F.**? I think not. Britannicus had been Caesar as the son of the living Emperor, Claudius—after Claudius's death he had been pushed entirely on one side: it was therefore as **AVGVSTI F.** that this coin, looking back to the circumstances of his lifetime, must know him. The style of the coins, so far as can be judged in their poor state, seems to be rather in favour of this later date. This seems to be one more of those questions in Roman coins, in which the obvious answer is easy—and wrong.

H. MATTINGLY.

MISCELLANEA.

ATTIC GOLD RATIOS.

A CORRECTION.

In my paper on gold ratios, in this year's first number, I gave (p. 26, top) a figure which purports to be the weight of certain lumps of gold (mentioned in I.G.I.² 301, line 54) multiplied by ten: and I suggested that we can restore the figure thus obtained, in lines 106-7 of the same inscription. I saw here the demonstration that, to obtain the silver value of these lumps of gold, you multiplied their weight by 10.

The figure is unhappily incorrect,¹ being 1 Talent too much. My demonstration therefore fails. The fact, however, remains that $\text{TXXXHHH}\overline{\text{P}}\Delta\Delta$, when multiplied by 10 gives $\Delta\overline{\text{P}}\text{XXX}\overline{\text{P}}\text{HH}$; i.e. so far as the drachmas are concerned, the sum is correct. It is the Talents which are wrong. Now there are strong reasons for thinking that the silver figure in lines 106-7, if it does not *equal* the gold figure in line 54, at least *includes* it; for all items on the front face are included in the totals on the side face, and it is not easy to see under what other total this particular item could come.

We are entitled to argue, then, that the ratio 10:1 (established by the drachmas) is likely to be right; and the odd Talent or Talents are due to some other item or items on the front face.

That granted, we can control the figure narrowly. The other item or items must have been worth, in silver, either 1 Talent or 6 Talents: i.e. the total Talents in lines 106-7 must have been 16 or 21. No other figure is epigraphically possible, short of such an improbably high figure as 52 Talents. Next, we can exclude the possibility of

¹ I wish to thank Mr. Woodward and Dr. Meritt, who pointed this out to me.

1 Talent: its gold weight would be 6 minas, and if this were added to the gold figure in line 105, the result is two spaces too long. On the other hand, 6 silver Talents' worth of gold weighs 36 minas; and this, when added to the gold figure in line 105, leaves it the right length.

Lines 103-8 should therefore be rewritten as follows:

. Δ††† ν φῖθοιδες χρυσιο σκ
α]πτεσυλ[ικο . . .² σταθμον η
105 €]λκοντες [ΤΤΠΗΗΗΗΠΔΔ. αρ
γ]υριον το[υτον γιγνεται Δ
Δ]ΤΧΧΧΠΗΗ[. λελογισμενον
δ]εκαστασιον &c.

I believe we can place this extra item on the front face. In lines 5-7 there are two consecutive gold items, not differentiated by their recipient; in I.G.I², both are restored as Kyzikene staters. I suggest to restore lines 5-6 thus:³ χρυσιο σκαπτεσυλικο φθοιδες η[ον παρελαβομεν παρα] [τον προτερον ταμιον] σταθμον ΧΧΧΠΗ. αργυριον τουτον γιγνεται ΠΤ. ν κυζικενοι στατ]ερες &c. This gives a line of 84 letters.

The Thasian Quota (see *Num. Chron.*, 1930, p. 24: cf. pp. 30 and 33) was 3 minas of gold or half a Talent of silver. Our new item is thus not only worth a round number of silver Talents, it is also a round number of Thasian Quotas: "bars of Skapte Hyle gold, handed over by our predecessors", it looks like twelve years of that Quota. The $\frac{1}{2}$ -Talent Quota was first paid in 444 B.C., when Thasos recovered her gold mines: just over twelve years before, if our document belongs to the first years of the war.

H. T. WADE-GERY.

² The three spaces in line 104 may have contained the *number* of the *phthoides*, but not the same number as in line 54.

³ I restore the full 6 Talents here. But there may be yet other items of Skapte Hyle gold, and if so we should restore here some smaller sum.

ALEXANDRIAN AND PTOLEMAIC COINS
FOUND IN ENGLAND.

As the opinion has been expressed¹ that Alexandrian coins did not find their way out of Egypt in ancient times, I think it may be of interest to give here a list of the notes which have been made from time to time since the year 1912 in the Coin Department of the British Museum of such coins, which have been brought to us, with the information that they have actually been found in this country. Notes of other Greek coins besides Alexandrian have also been taken, but they do not strictly concern us here, although I have added some notes on Ptolemaic coins. Were the alleged finds few in number, one would assume that the coins had been lost in comparatively modern times; but they are so numerous that we cannot always take that view. It will be observed that, the farther north we go, the rarer they are, which is exactly what we should expect if the coins came here in antiquity in the course of ordinary circulation.

The finds are arranged according to counties, working more or less from the south to the north. The Fetter Lane find is omitted². After the name of the place is given, when known, the year in which the discovery was reported to the Museum (unless the date of the actual discovery was given). Then follows the name of the Emperor and either a reference to the British Museum Catalogue or to Dattari, or a brief description. The persons who reported the finds frequently stated that the coins were found 'digging in a garden', 'in excavation', 'on the shore', and so on, and the indications varied from precise to very vague. The most remarkable account is that from a fisherman on the Ayrshire coast (no. 42), which is so vivid that, with the writer's permission, I print it just as it was written.

¹ By Prof. W. Kubitschek, most recently in *Num. Zt.*, N. F. 23. 1930, S. 182.

² See my remarks in Royal Commission on Historical Monuments, *London*, III: *Roman London*, p. 189. It is not omitted because the actuality of the find in London may be dubious, but because a single hoard is of less importance than sporadic finds as evidence of circulation. See p. 190 of the same volume.

1. London. King's Cross. 1925. Diocletian. *Rev.* Zeus seated, year 5.
2. London. Stoke Newington. 1921. Diocletian. *Rev.* Elpis, year 1.
3. London. Stoke Newington. 1930. Diocletian.
4. London. Streatham. 1914. Maximian. B.M.C. 2567.
5. Kent. Deal. 1930. Vespasian. B.M.C. 222.
6. Kent. Herne Bay. 1924. Salonina. *Rev.* Eagle, year 4.
7. Middlesex. Hounslow. 1914. Aurelian. B.M.C. 2364.
8. Middlesex. Twickenham. 1926. Claudius II. *Rev.* Nike, year 2.
9. Sussex. Brighton. 1917. Pius. Dattari 2294.
10. Sussex. do. do. Gallienus. B.M.C. 2192.
11. Sussex. do. 1920. Diocletian. B.M.C. *Obv.* 2486. *rev.* 2488.
12. Sussex. Middleton nr. Bognor. 1916. Claudius II. B.M.C. 2316.
13. Hants. Petersfield. 1919. Nero. B.M.C. 166.
14. Hants. Portsmouth or Cosham. 1914. Claudius II. B.M.C. 2308.
15. Hants. Winchester. 1915. Nero and Poppaea, year 10.
16. Somerset. Bath. 1919. Maximianus. B.M.C. 2550 var.
17. Somerset. Spaxton nr. Bridgwater. 1917. Probus. *Rev.* Eagle, year 4.
18. Devon. — 1916. Aurelian. *Rev.* Eagle, year 2.
19. Devon. Plymouth (near). 1916. Claudius II. *Rev.* Eagle, year 1.
20. Devon. Plymouth. 1919. Tacitus. *Rev.* Homonoia (?).
21. Devon. Torbay. Diocletian. B.M.C. 2519.
22. Cornwall. — 1926. Aurelian. *Rev.* Eagle, year illegible.
23. Cornwall. Stony Bridge, parish of Tywardreath (found in old stream tin-works). 1928. Aurelian?
24. Essex. Purfleet. 1929. Uncertain of 3rd. cent. *Rev.*
25. Essex. Thorp Bay nr. Southend. 1921. Probus. *Aequitas*, year 2.
26. Suffolk. Beccles (nr.), on banks of Waveney. 1927. Probus. *Rev.* Eagle, year 6.
27. Suffolk. Ipswich (in or nr.) 1922. Six coins: Claudius II (3), Probus (1), Aurelian (2); found together.
28. Herts. St. Albans. 1929. Claudius Gothicus. *Rev.* *Aequitas*, year 2.
29. Herts. Watford. 1920. Valerian. B.M.C. 2142.
30. Bucks. Chesham (site of Roman villa). 1914. Uncertain Emperor, c. 240-250 A.D.

31. Gloucestershire. Bristol (in derelict Roman harbour, in the Avon. 1930. Claudius II. *Rev.* Eagle, year 3, and four others similar.
32. Worcestershire. Worcester (nr.). 1921. Maximian. B.M.C. 2555.
33. Leicestershire. Market Harborough. 1930. Diocletian. *Rev.* Alexandria, year 5; Carinus. *Rev.* Elpis, year 2.
34. Derbyshire. Barrow-upon-Trent. Diocletian. B.M.C. 2530.
35. Derbyshire. 'Bullwell' (nr.)'. 1926. Maximian. *Rev.* Elpis, year 2; and Diocletian. *Rev.* Zeus seated, year 3?
36. Lincs. Gainsborough (nr.). 1914. Philip I. B.M.C. 1993.
37. Lincs. Grantham. 1921. Diocletian. *Rev.* Zeus, year 8.
38. Staffordshire. Burton-on-Trent. 1928. Diocletian. *Rev.* Elpis, year 6.
39. Lancs. Hollinwood nr. Oldham. 1922. Carus. B.M.C. 2441.
40. Lancs. Liverpool. 1930. Aurelian. *Rev.* Eagle, year 5.
41. Yorks. Whitby. 1923. Maximian. *Rev.* Tyche, year 9.
42. Ayrshire, shore of Irvine. 1928. Carus. *Rev.* Illegible.

The account of this last discovery follows:

126 Ardeer Square,
Stevenston Ayrshire,
N.B.

To Coin Expert.

Dear Sir,

I received Coin back alright was very glad to have the neccassary informatition which you furnished me with and I must thank you awfully for same Now you say it tis of trifling value would you be kind enough to tell me or give me a offer for same as it tis old & a very curious place where I found it I was fishing one day this spring April on the shore of Irvine on the Ayrshire coast when I was looking for bait which of course was limpets (Shell Fish) when I was going over some of the rocks. I happened to Slip on some of the Seaweed which generally covers some of the rocks which of course I fell and in the position I was in my eyes caught on this shell fish

² Bullwell is in Notts, 5 or 6 miles from the Derbyshire border.

under-neaght the rock it was a pretty large Limpet. So I proceeded to have the fish which was in a awkward position but with the help of small piece of Iron bar. I Broke the shell which of course it lost the suckion and fell of the rock. Then I retriveed it from under the rock. I then took out my-pocket knife to cut the fish into parts for the Hooks when the knife came against something hard which on lifting it with the blade of the knife I took the Coin to be a small flat stone I kept it in my hand while I baited the 3 hooks and casted my line into the water then I was about to throw away what I thought was a stone Imagine my surprise when I look at it again and seen it was beginning to get clear, I noticed the head on it then I turned the other side which I took to be the Image of a tree I sent it the Coin to the Glasgow Museum which they could not tell me anything about it only it was a Roman Coin and was old Now Sir that is the history of how it came into my possession Now Sir would you kindly tell me if it tis head of Carus 283 A.D. or of Alexandria the Town of Egypt or was Alexandria a Queen of Egypt. Thanking you again Sir for your informatiion

I remain Yours
Truly James Murray.

P.S. Sir I enclose a Stamped address envelope for answer of same.

I think it will be agreed that, whatever doubt may be entertained of any particular items, the cumulative evidence shows that Alexandrian Coins came here in the course of ancient trade. Probably, next to Alexandrian, the commonest Greek coins to be found in this country are Ptolemaic. I have given details on this subject in the *Rochester Naturalist*, vol. vi, 1924, no. 130, p. 54. A good many additional finds of Ptolemaic coins have been noted since then, e.g. Blaenau, Festiniog, Merioneth (Ptolemy VII); Oxford (Ptolemy III ?); Leicester (Ptolemy VI, Svor. 1426, 3 specimens); Winchester (Ptolemy III, Svor. 974; Ptolemy III, Svor. 992 and Ptolemy IV, Svor. 1127—the last two on a Roman site, 6 ft. deep with coins of Claudius, Nero, and Vespasian); Wroxeter (Ptolemy VI, Svor. 1384); Canterbury (Ptolemy III, B.M.C., Pl. XII. 7); Pevensey, Ptolemy III (B.M.C., Pl. XXII. 6); Hertford, Ptolemy III (?).

GEORGE F. HILL.



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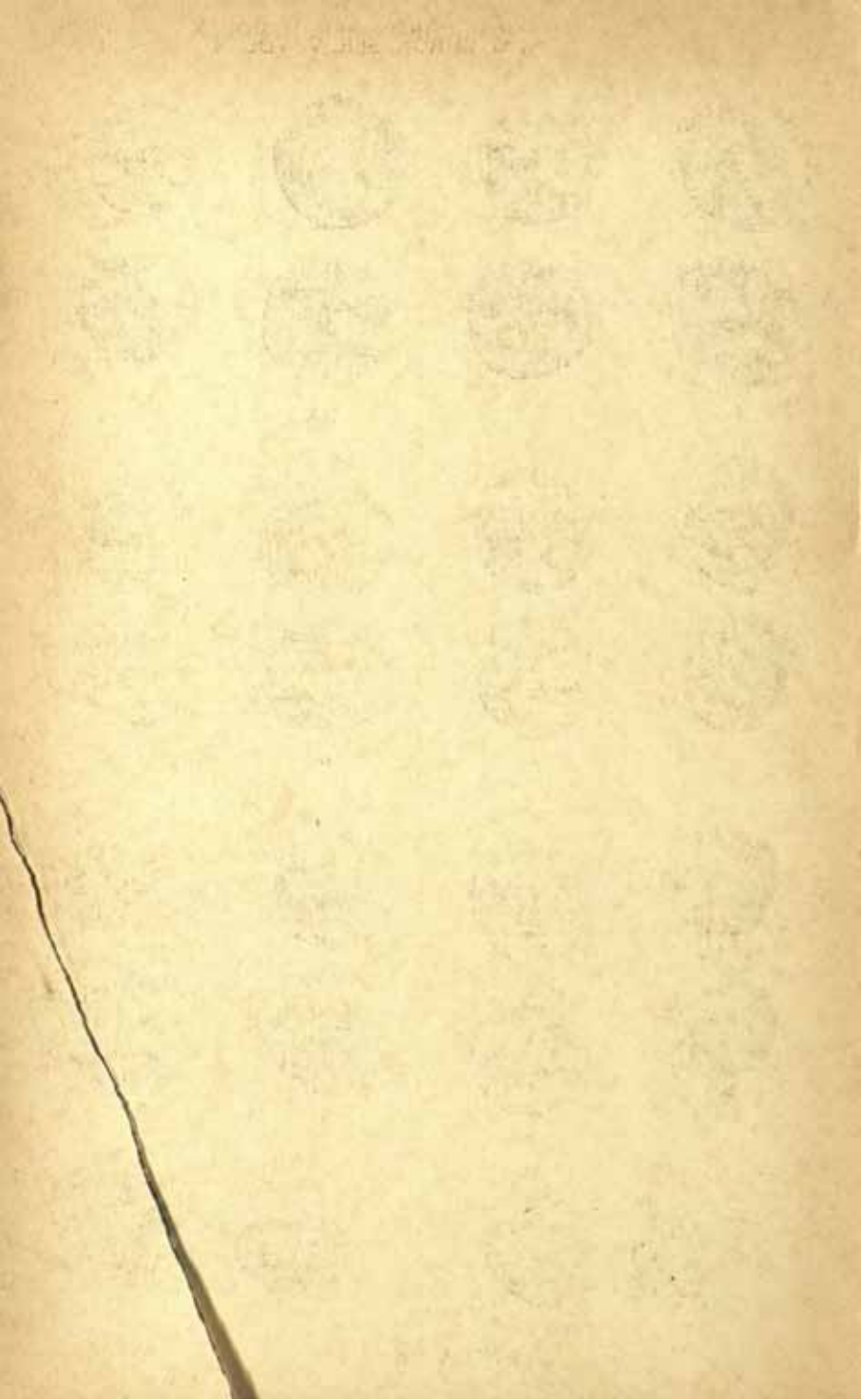
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18 A

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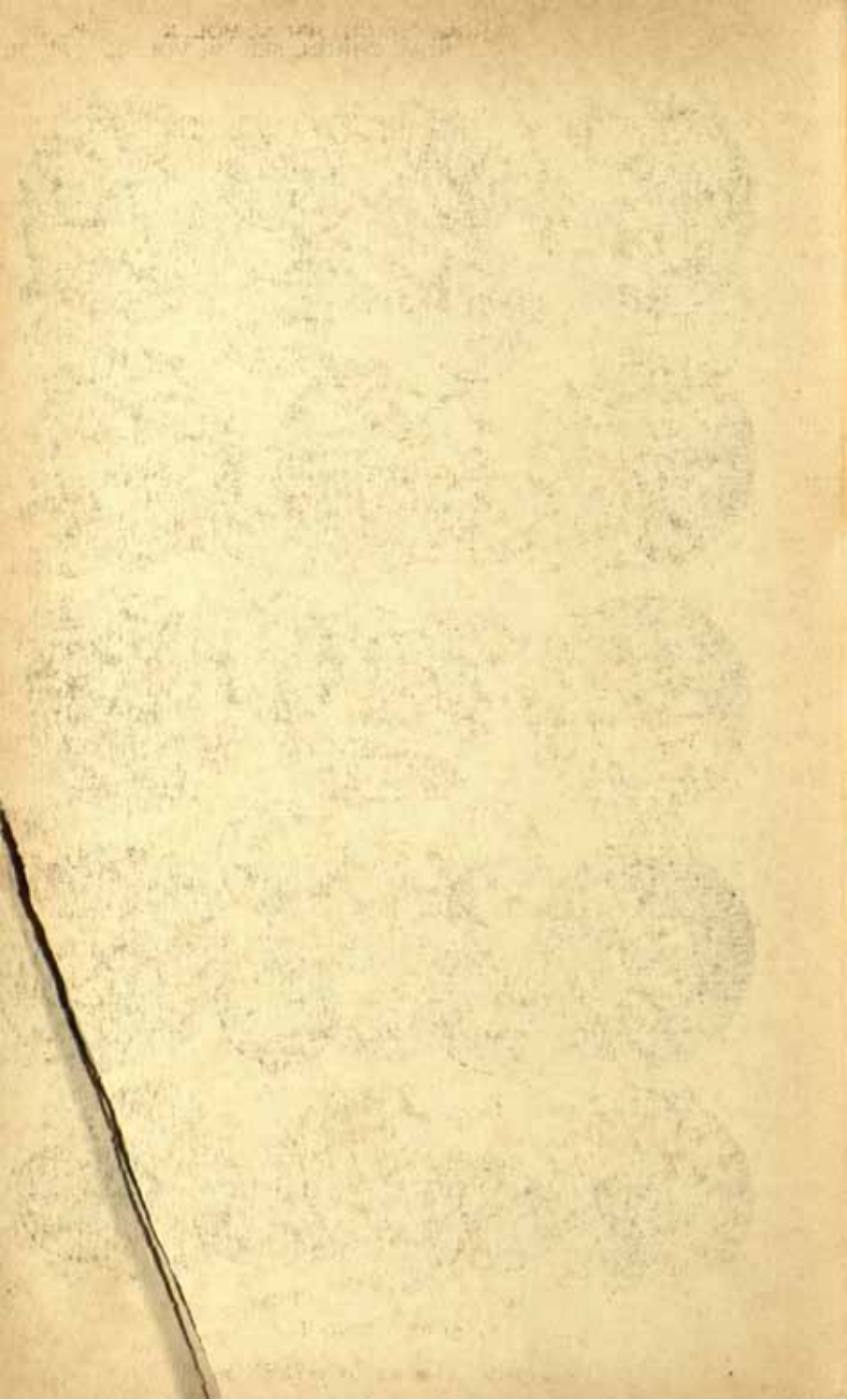
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I-2



III (b) 2



IV (b) 2



Ib



IV (a)



V (a) a



V (b) 1



V (d) 5



V (d) b



V (d) c



V (i) a



V (m) 4



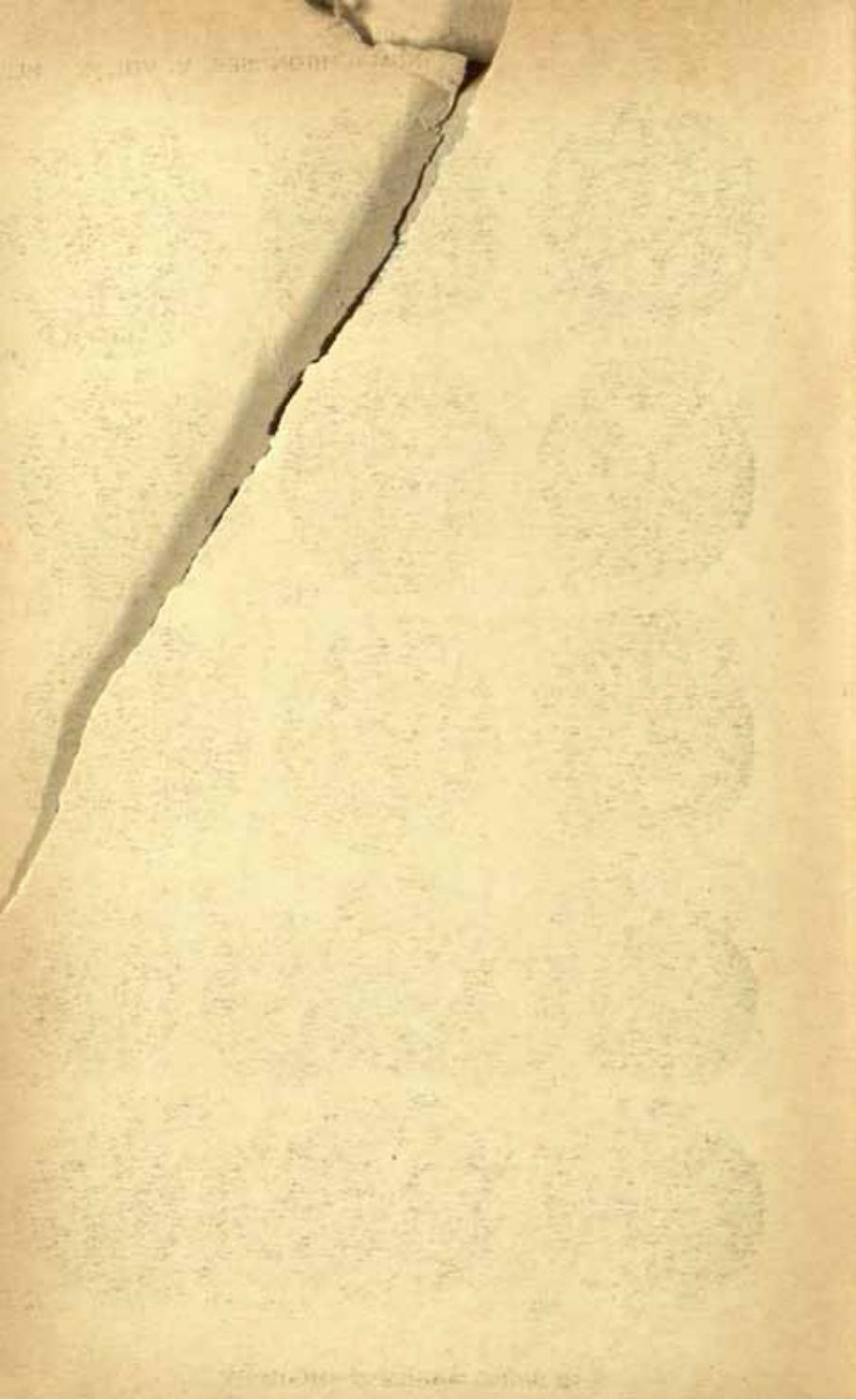
V (f) a



V (h) c



V (q) a





V(p) 1



VII(b) 1



V(s) c



VI d



V.



VIII(b) 2



IX a



IX-2



IV-1



V(c-h) 1



VIII-2



IX-1



V(a) a



V(d-b) a



VII b



IX(a) c



I-1



IV-2



V(a) 1



VIII-1



IX-2



I a



IV a



V(d-i) a



VIII c



IX(b) a



I-2



II-3



III-4



I a



II a



III c



III-4



V(a) 2



V(k-m) 3



V(j-l) 1



IV b



V(a) 1



V(j-k) c



V(q-r) a



V(s)2



V(s)c



VI-2



V(i)b



VIII-1



VIIIb



I-1



III-1



V(a)2



V(d)1



IIa



IIIb



V(s)b



V(j-k)b



V(j-m)1



V(a)2



VI3



VIII 1



V(-lm)b



V(i)d



VIc



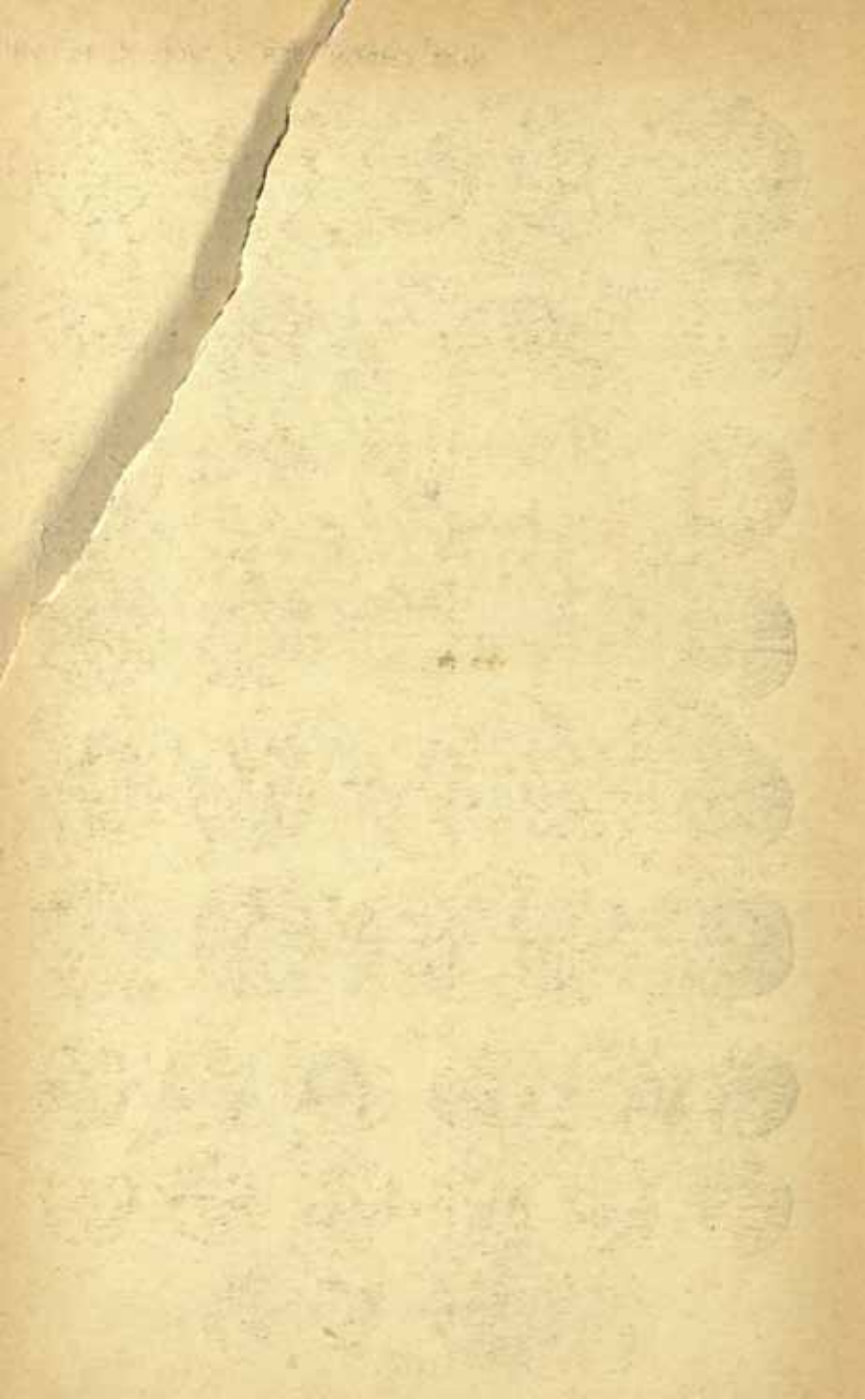
VI d

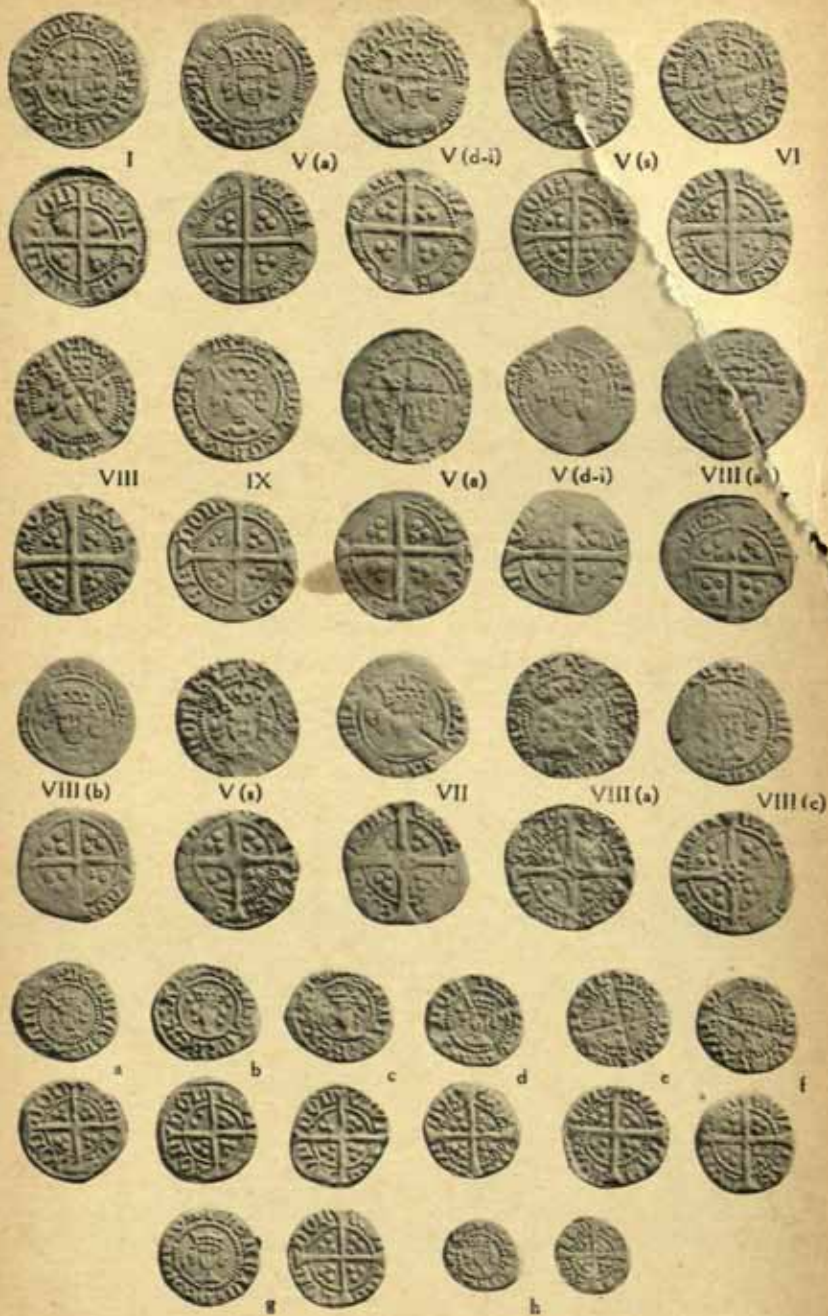


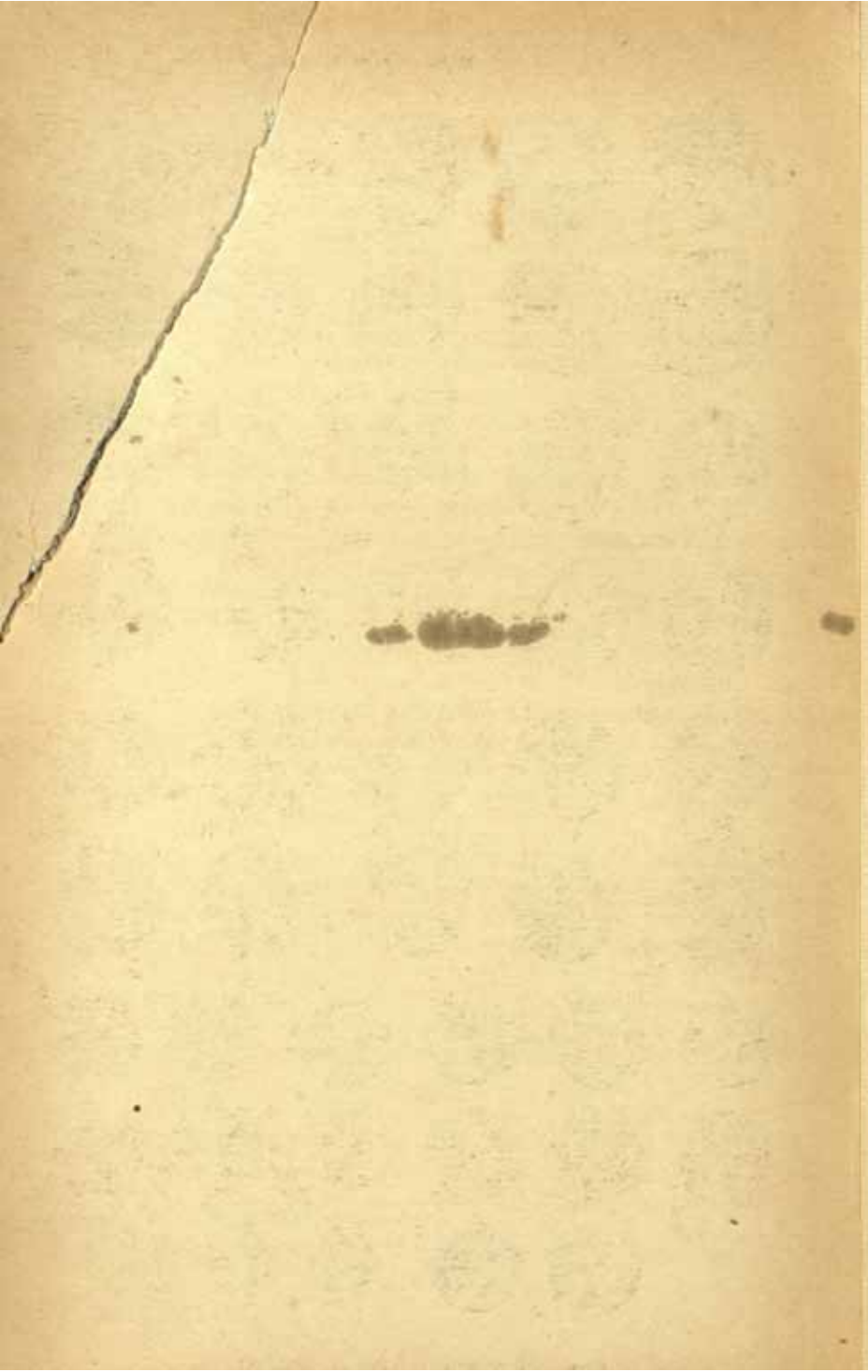
IX(a)2



IX(b)a









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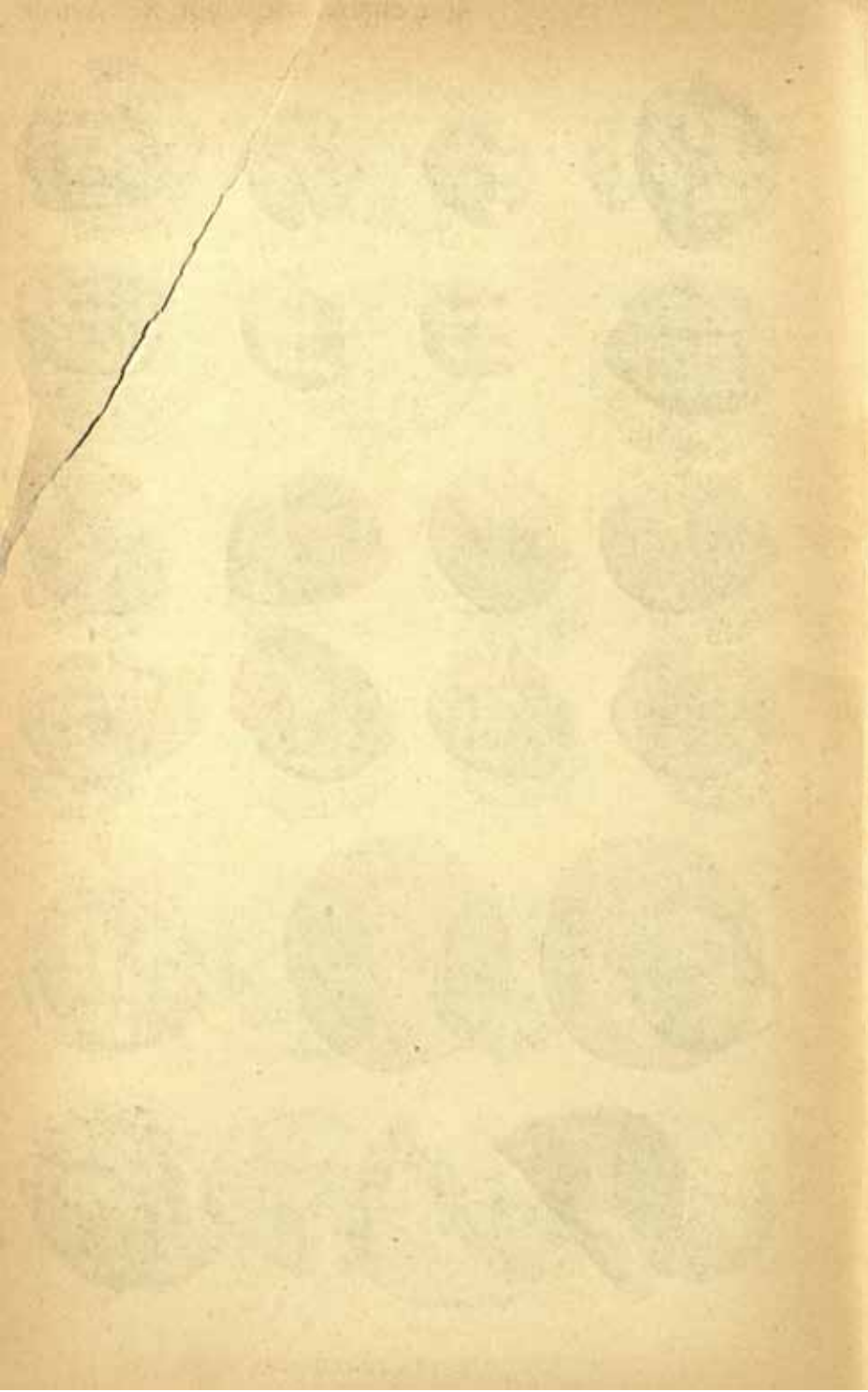


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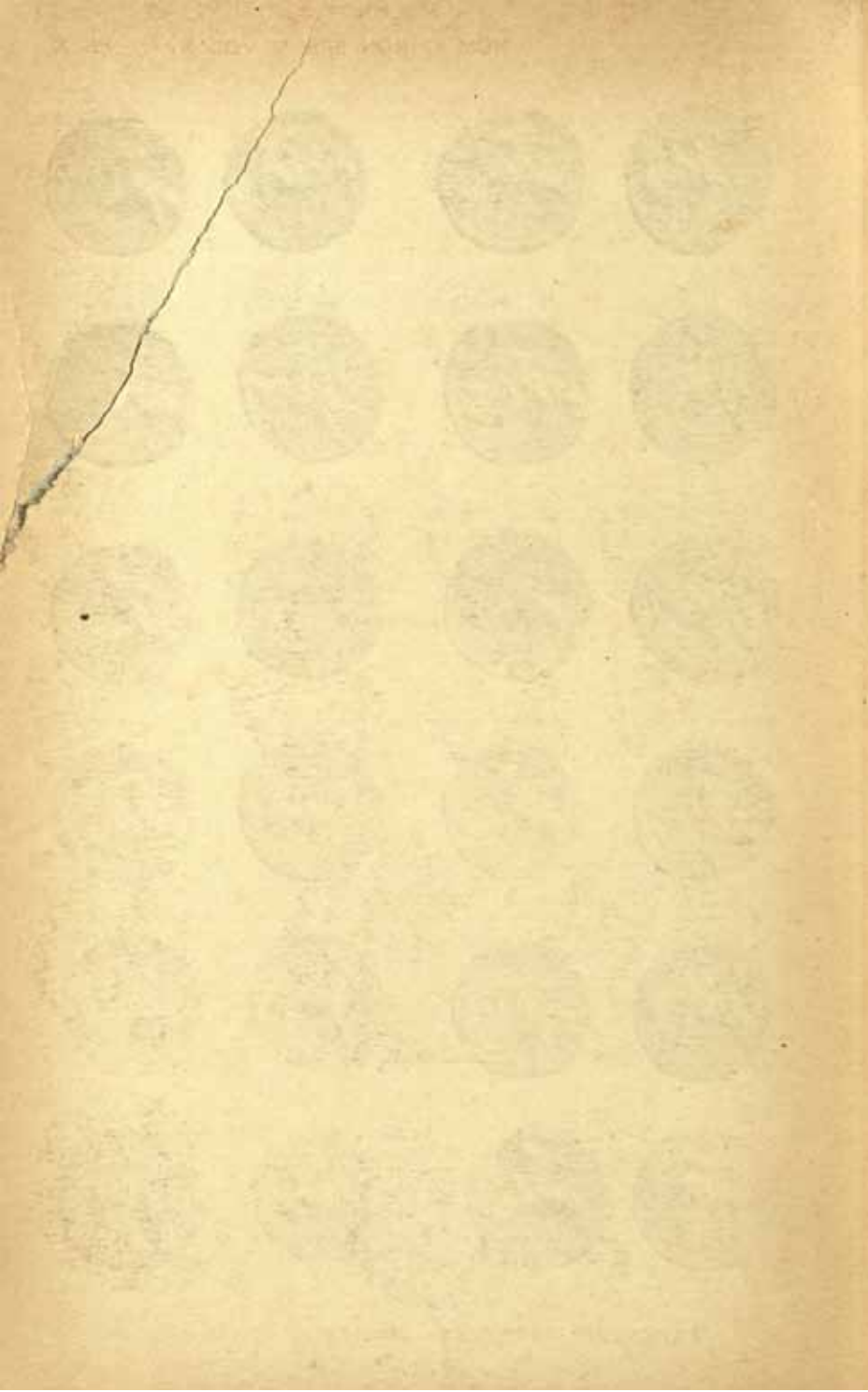


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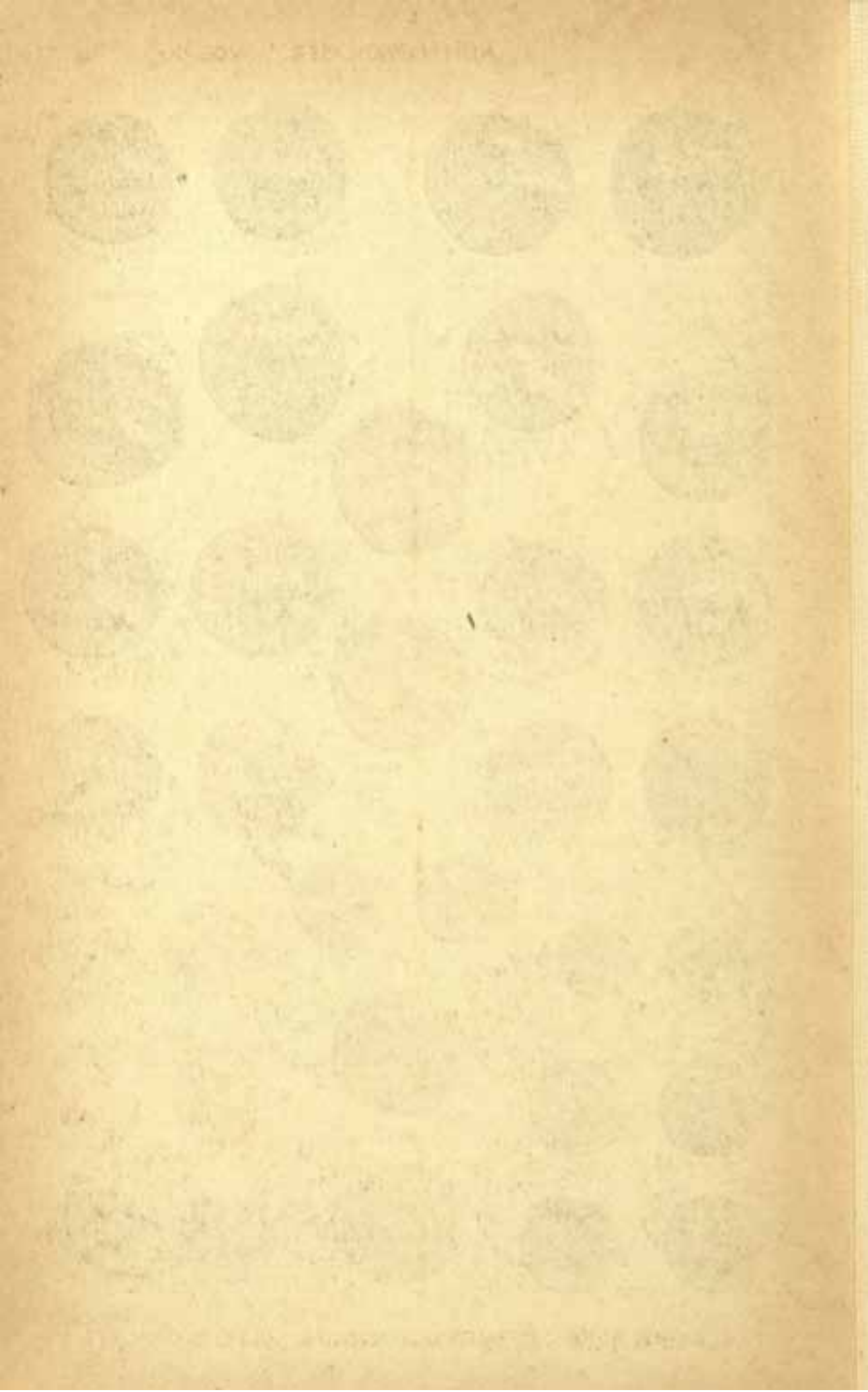
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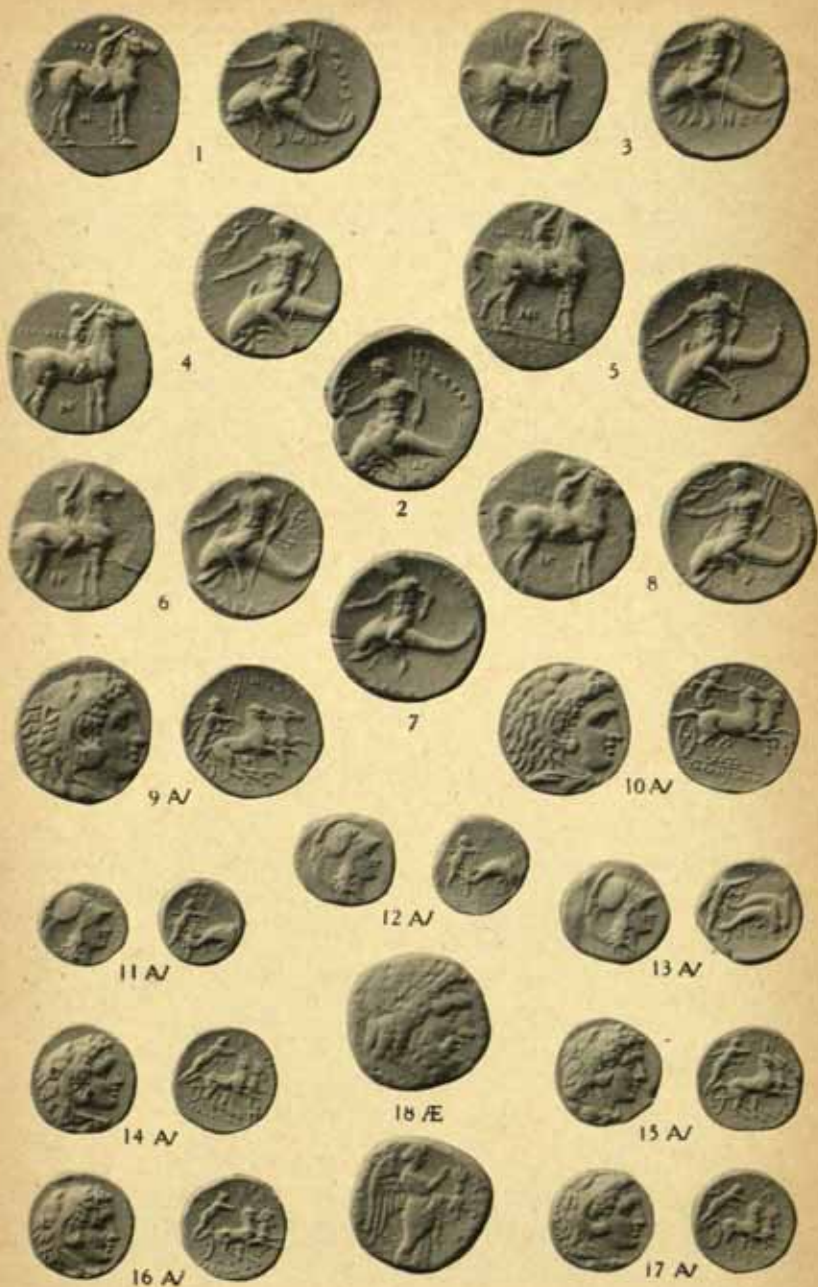


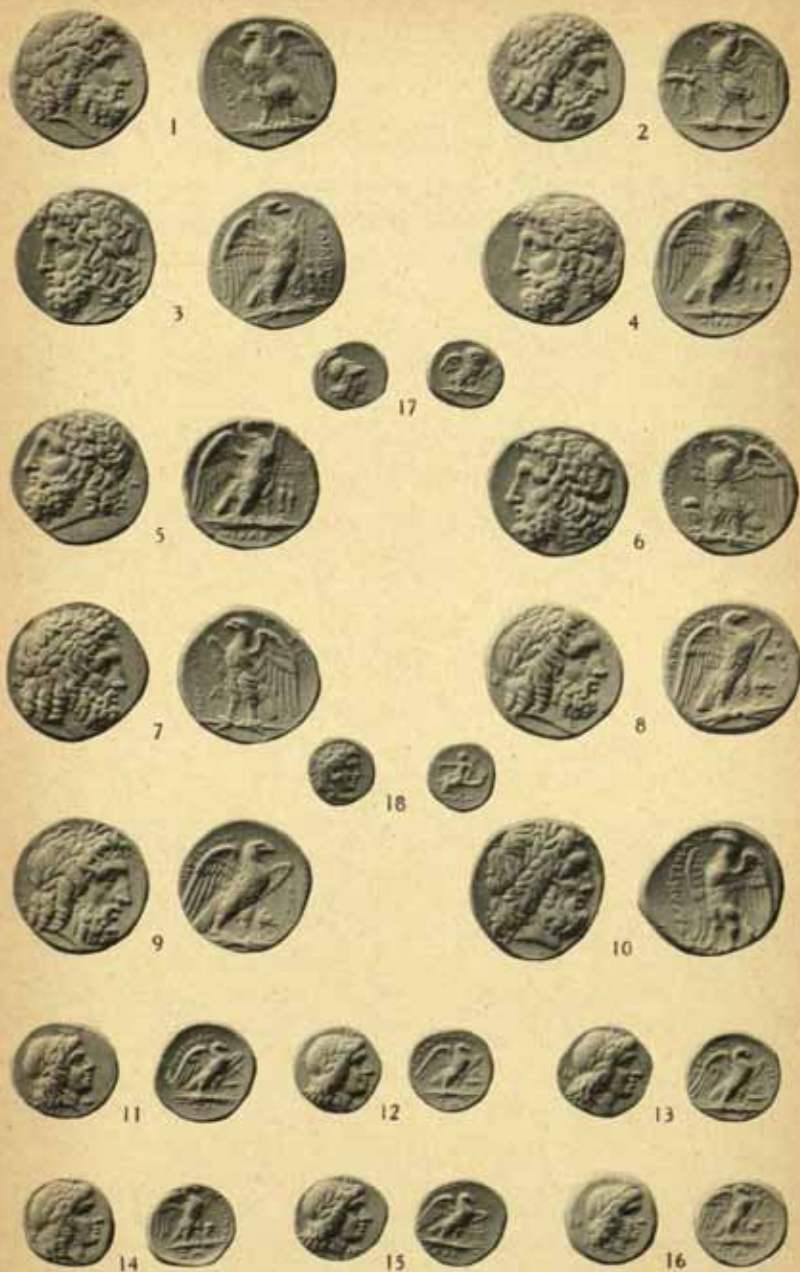
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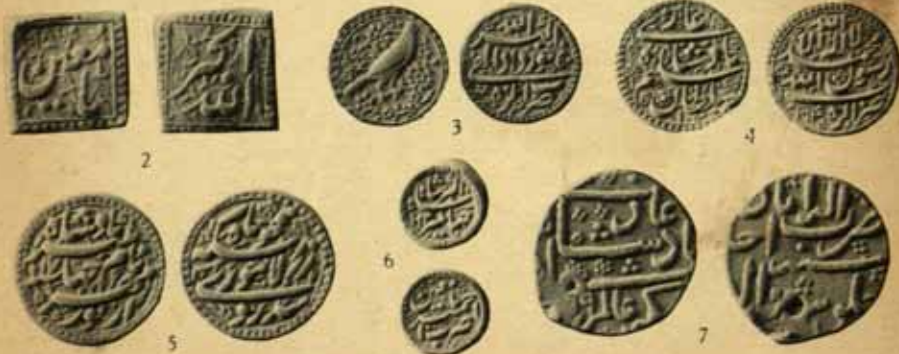


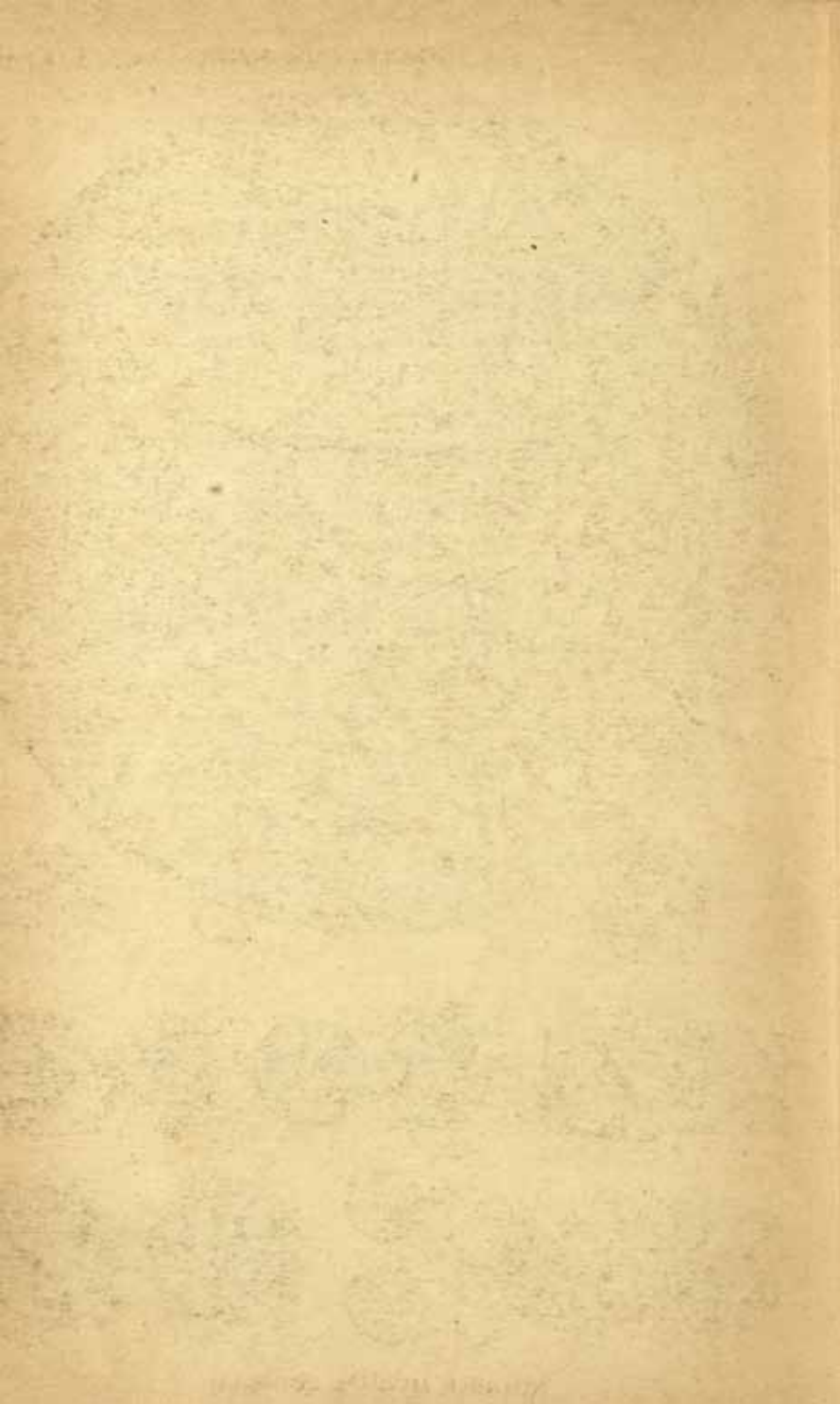


TARENTINE GOLD COINS STRUCK DURING THE PYRRHIC HEGEMONY



COINS OF CARAVSIUS AND ALLECTVS.







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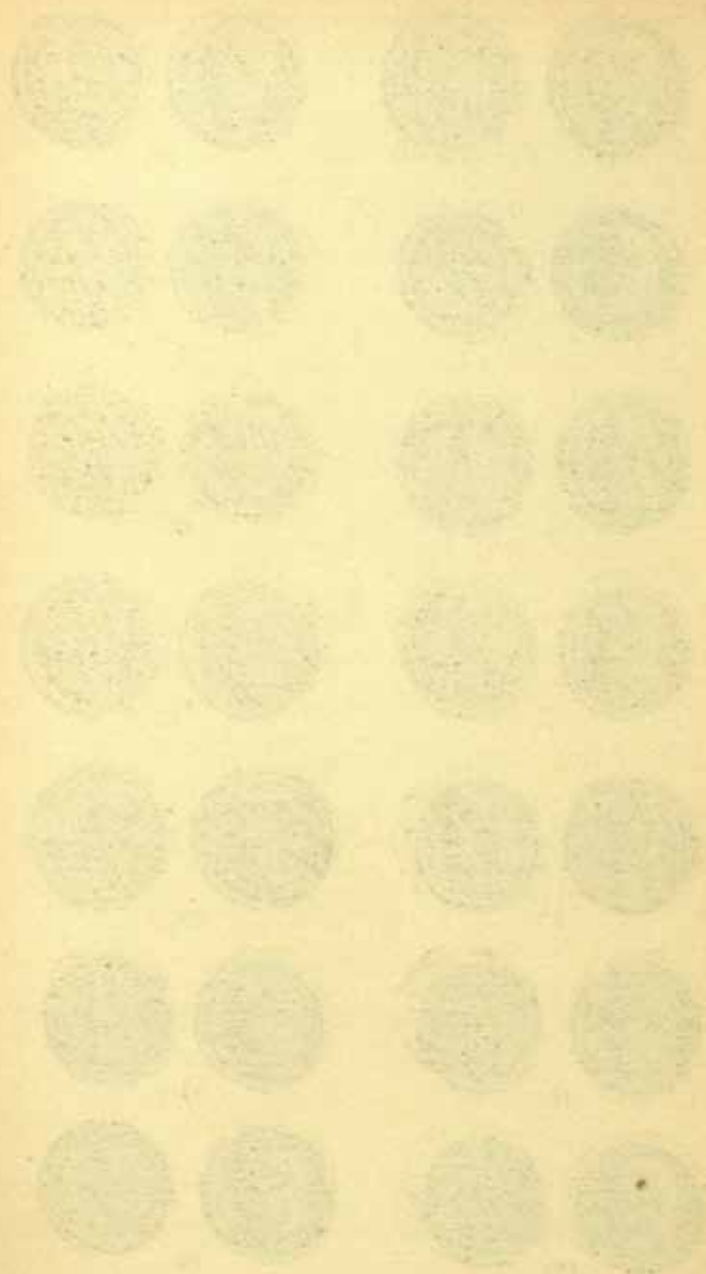


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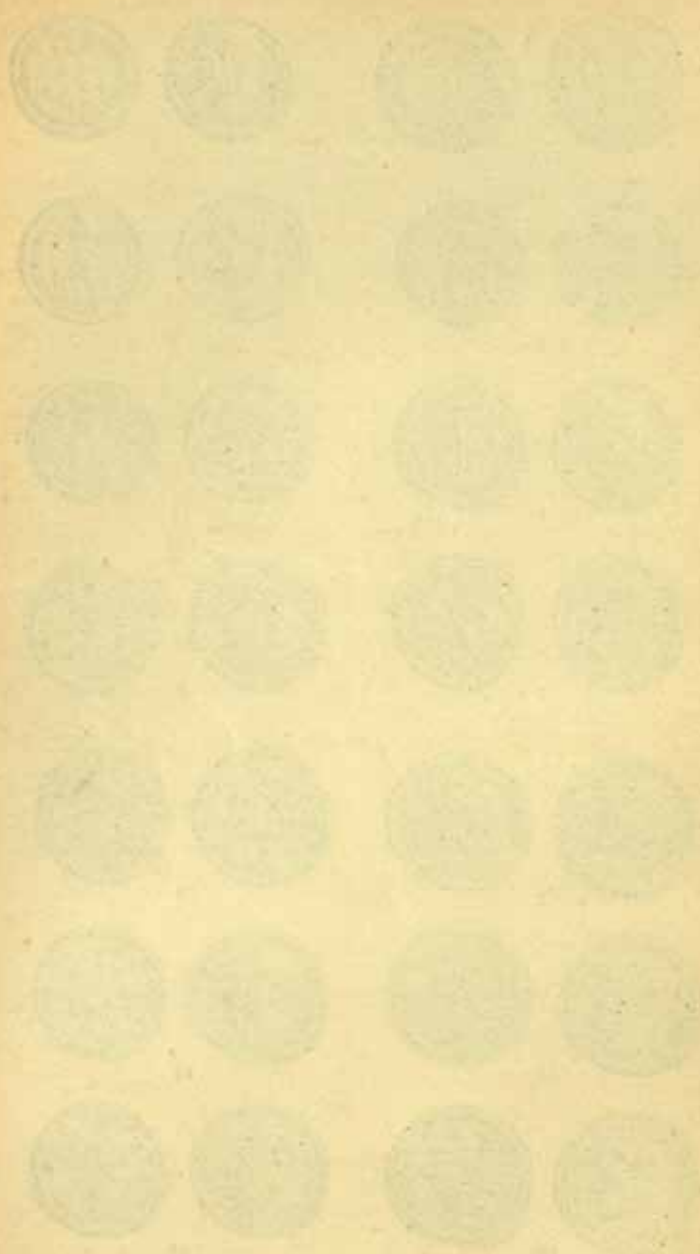


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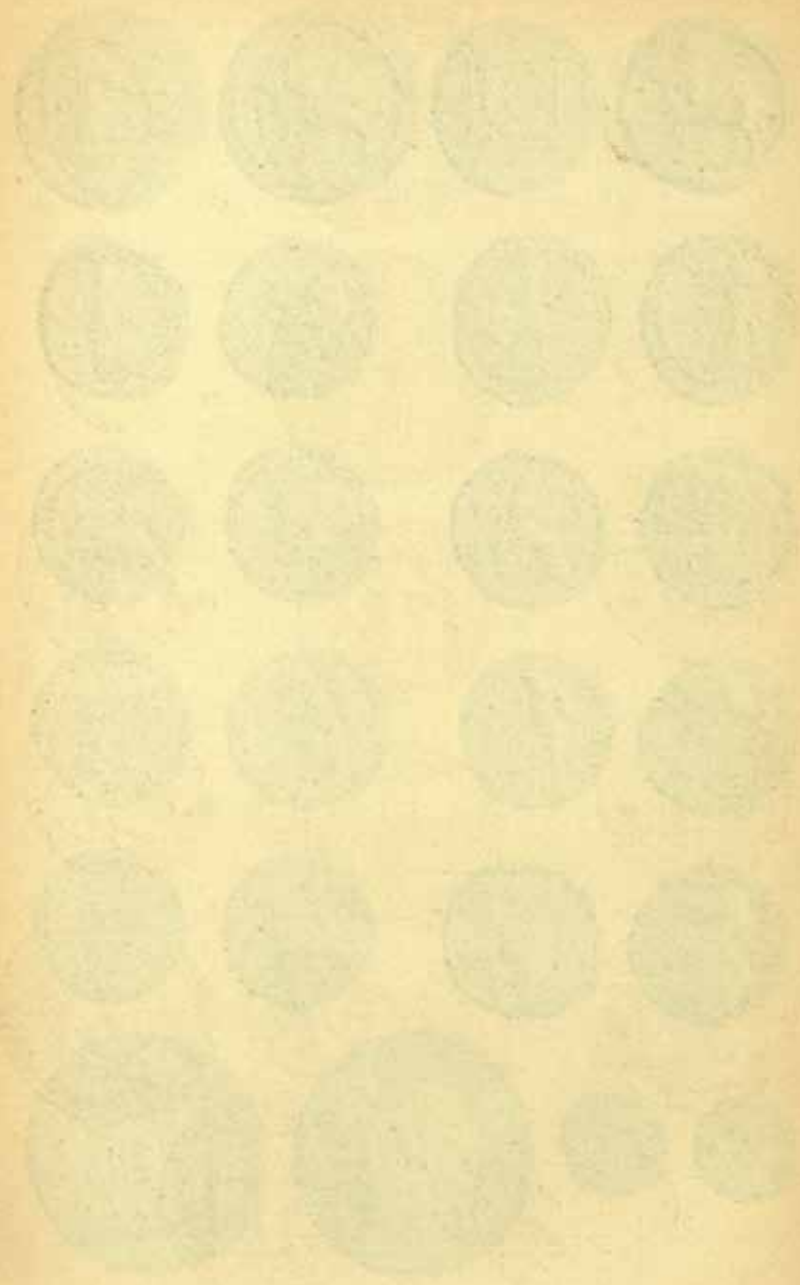


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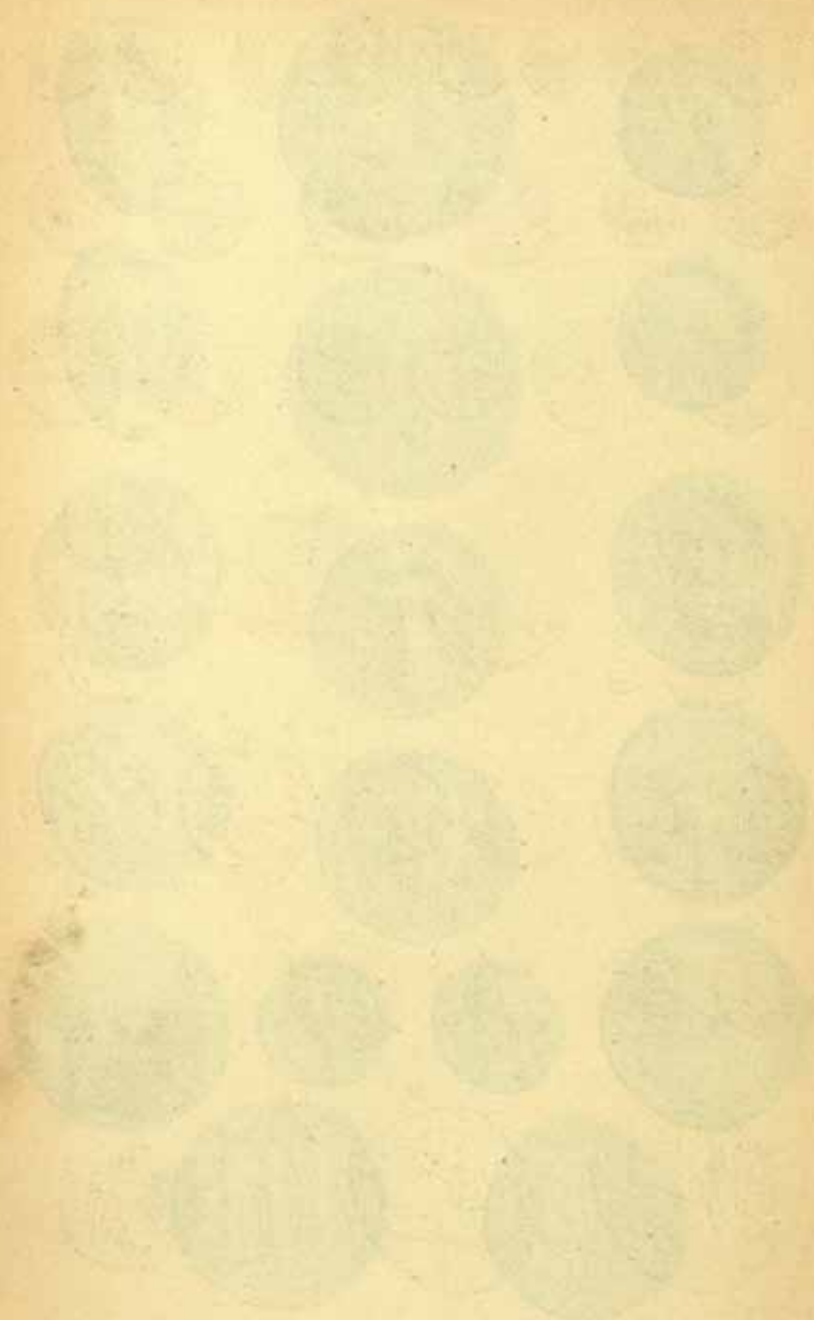


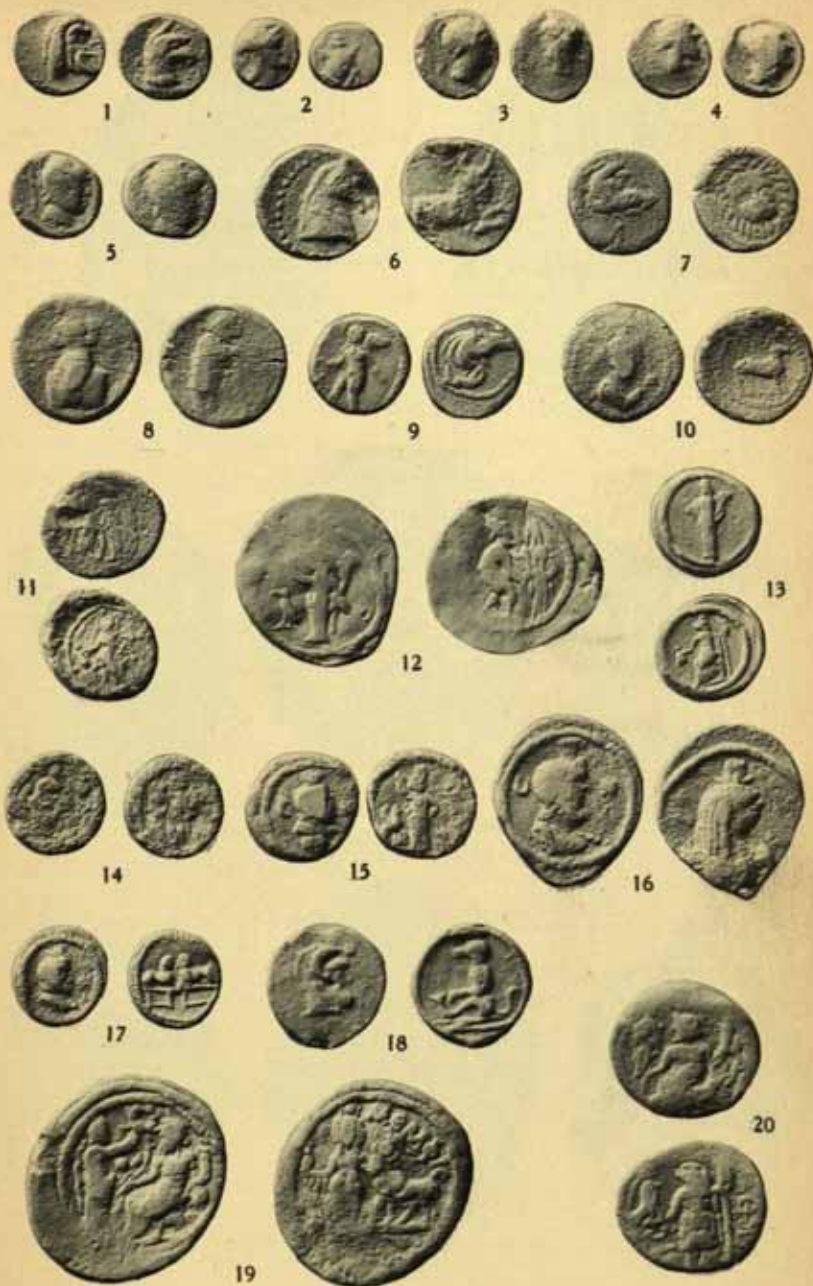
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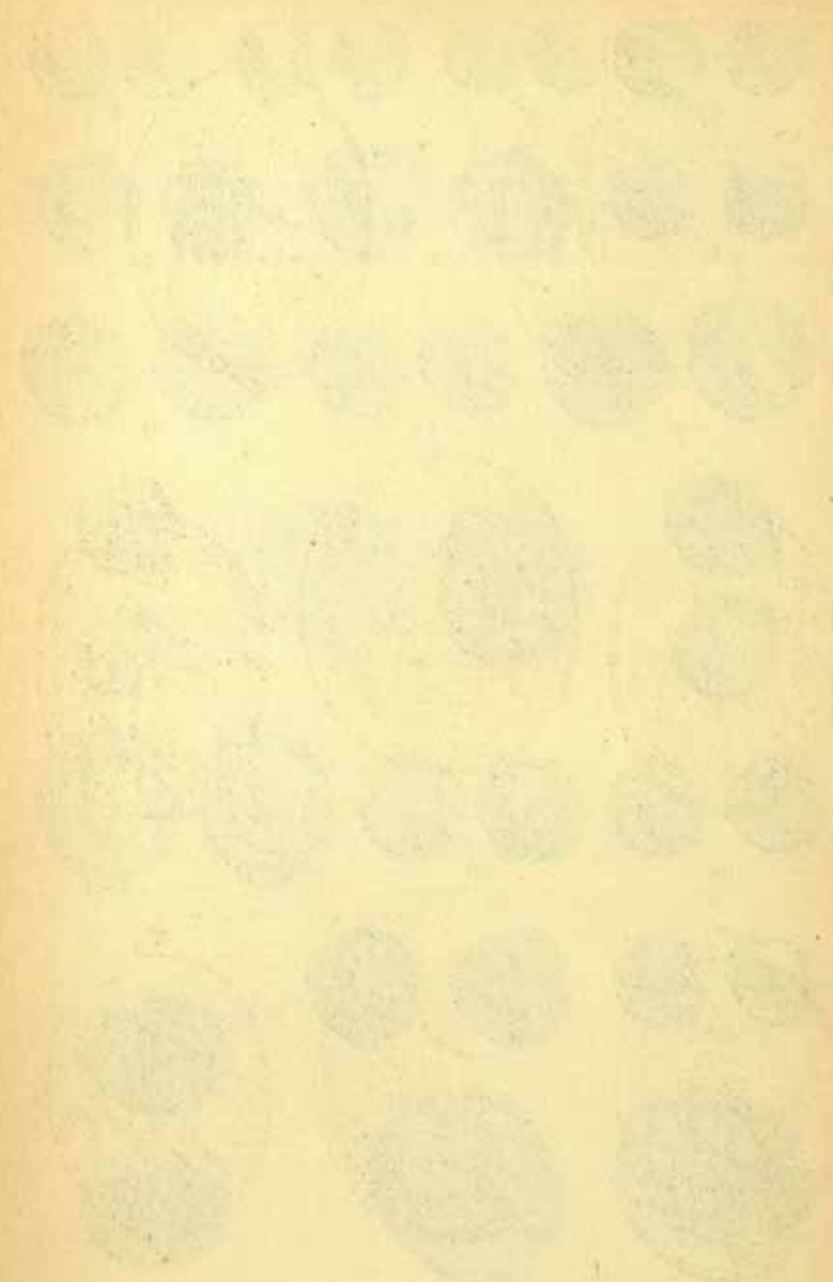


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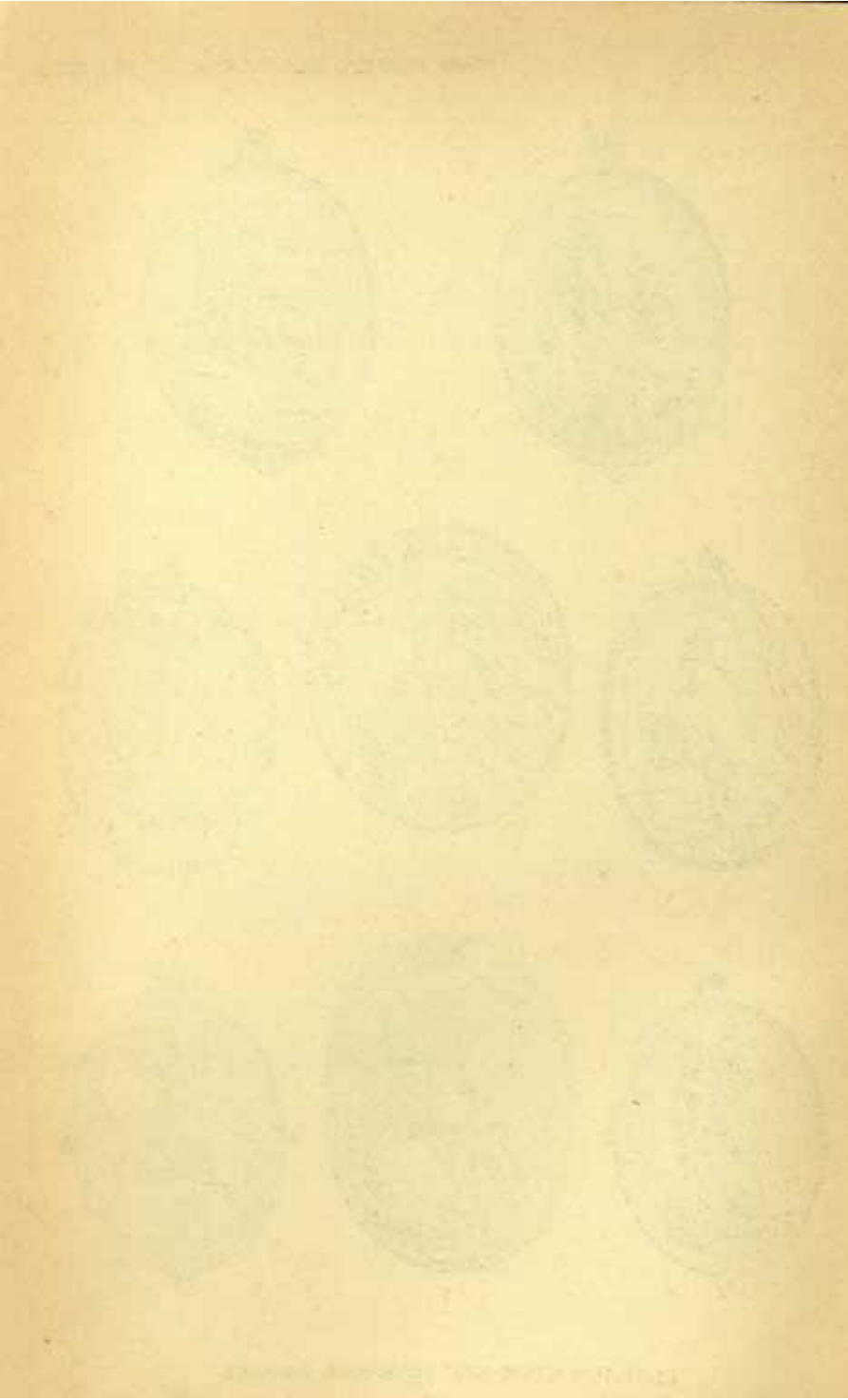


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FORLORN HOPE AND EDGEHILL BADGES



LIST OF FELLOWS
OF THE
ROYAL
NUMISMATIC SOCIETY
1930

PATRON

HIS MAJESTY THE KING

LIST OF FELLOWS

OF THE

ROYAL

NUMISMATIC SOCIETY

1930

*The sign * indicates that the Fellow has compounded for his annual contribution : † that the Fellow has died during the year.*

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- 1920 ABBOTT, GEORGE HENRY, Esq., B.A., M.B., C.M., 185 Macquarie Street, Sydney, N.S.W.
- 1907 ALLAN, JOHN, Esq., M.A., F.S.A., *Deputy Keeper of Coins*, British Museum, W.C. 1, *Hon. Secretary*.
- 1917 ATKINSON, DONALD, Esq., B.A., F.S.A., The University, Manchester.
- 1907 BAIRD, REV. ANDREW B., D.D., The Library, Manitoba College, Winnipeg, Canada.
- 1902 BALDWIN, A. H., Esq., 3 Adelphi Terrace House, W.C. 2.
- 1923 BALDWIN, A. H. F., Esq., 3 Adelphi Terrace House, W.C. 2.
- 1905 BALDWIN, PERCY J. D., Esq., 2 Glenesk Road, Eltham, S.E. 9.
- 1909 BALDWIN BRETT, MRS. A., 136 Maple Avenue, Flushing, New York, U.S.A.
- 1917 BARKER, A. LEIGH, Esq., M.A., Spreacombe Manor, Braunton, North Devon.
- 1917 BARNARD, F. PIERREPONT, Esq., M.A., D.Litt., F.S.A., Bilaby Hall, Alford, Lincs.
- 1906 BEATTY, W. GEDNEY, Esq., 247 Central Park West, New York, U.S.A.
- 1919 BEAZLEY, PROFESSOR J. D., M.A., Ashmolean Museum, Oxford.
- 1920 BERNAYS, M. EDOUARD, 33 Avenue Van Eyck, Antwerp.

ELECTED

- 1923 BLUNT, C. E., Esq., 15 Gerald Road, S.W. 1.
- 1917 BORDONARO, BARON G. CHIARAMONTE, Palazzo Bordonaro, Piazza Municipio, Palermo, Sicily.
- 1895 BRIGHTON PUBLIC LIBRARY, The Curator, Brighton.
- 1906 BRISTOL CENTRAL LIBRARY, The Librarian, Bristol.
- 1910 BRITTAN, FREDERICK J., Esq., 63 Bingham Road, Addiscombe, Croydon.
- 1908 BROOKE, GEORGE CYRIL, Esq., M.A., Litt.D., F.S.A., British Museum, W.C. 1.
- 1930 BROOKE, W. A., Esq., Spring House, Thetford.
- 1930 BROWNE, CHRISTOPHER C., Esq., The Kennels, Bishops Stortford.
- 1924 BUNN, C. J., Esq., 125 Grove Lane, S.E. 5.
- 1897 BURN, SIR RICHARD, C.S.I., I.C.S. (retd.), M.R.A.S., 9 Staver-ton Road, Oxford.
- 1911 BURTON, FRANK E., Esq., J.P., F.S.A., Orston Hall, Notts.
- 1904 CAHN, DR. JULIUS, Niedenau 55, Frankfurt-am-Main, Germany.
- 1886 CALDECOTT, J. B., Esq., 38 Roland Gardens, S.W. 7.
- 1914 CAMERON, LT.-COL. J. S., D.S.O., Low Wood, Bethersden, Ashford, Kent.
- 1929 CAMMANN, MRS. GEORGE P., 1088 Park Avenue, New York City, U.S.A.
- 1925 CARDIFF, Central Library, The Librarian.
- 1894 CARLYON-BRITTON, MAJOR P. W. P., D.L., J.P., F.S.A., Eversfield, Fishbourne, Chichester.
- 1923 CARLYON-BRITTON, RAYMOND, Esq., Eversfield, Fishbourne, Chichester.
- 1923 CARTWRIGHT, RICHARD, Esq., Aynho Park, Banbury.
- 1925 CHAMBERLAIN, JOHN A., Esq., 44 Barrington Road, S.W. 9.
- 1929 CHAPMAN, G. E., Esq., Chatley Dene, Westham, Sussex.
- 1922 CHARLIER, M. PIERRE, 213 Grand Rue, Montignie-sur-Sambre, Belgium.
- 1929 CHECKLEY, JAMES F. H., Esq., 17 Sandringham Gardens, North Shields.
- 1914 CICCIO, MONSIGNOR CAVALIERE UFF. GIUSEPPE DE, 14 Parco Margherita, Naples.
- 1891 *CLAUSON, THE HON. SIR CHARLES, C.B.E., Hawkshead House, Hatfield, Herts.
- 1911 *COATES, R. ASSHETON, Esq., F.S.A., Cawder, King's Road, Berkhamsted, Herts.

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- 1913 *CODRINGTON, HUMPHREY W., Esq., C.C.S., B.A., M.R.A.S.,
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- 1919 COLEGATE, ARTHUR, Esq., The Pole, Northwich, Cheshire.
- 1918 COLES, COLONEL A. H., C.M.G., D.S.O., 18 Walpole Street,
Chelsea, S.W. 3.
- 1926 CÔTE, M. CLAUDIUS, 33 Rue du Plat, Lyons, France.
- 1902 COVERNTON, J. G., Esq., M.A., C.I.E., Parsonage House,
Finchingfield, Braintree, Essex.
- 1919 *CRASTER, H. H. E., Esq., M.A., D.Litt., F.S.A., All Souls
College, Oxford.
- 1922 CRIPPS, MRS. WILFRED, Cripps Mead, Cirencester.
- 1886 *CROMPTON-ROBERTS, CHAS. M., Esq., 52 Mount Street, W. 1.
- 1920 CROSS, A. PEARL, Esq., F.R.G.S., 18 University Mansions,
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- 1914 CROWTHER-BEYNON, V. B., Esq., M.B.E., M.A., F.S.A.,
Westfield, Beckenham, Kent.
- 1930 DAVIS, A. W., Esq., British Consulate, Shiraz, Persia.
- 1926 DEACON, JAMES HUNT, Numismatic Section, The Art
Gallery, Adelaide, South Australia.
- 1922 DEE, JOSEPH P., Esq., M.D., Barnard Lea, Walton-on-the-Naze.
- 1922 DICKSON, REV. W. H. FANE, Gorsley Vicarage, Gloucester.
- 1919 DRABBLE, G. C., Esq., Los Altos, Sandown, Isle of Wight.
- 1911 DRUCE, HUBERT A., Esq., Sandesfoot House, Wyke Regis,
Weymouth.
- 1928 DUNCAN, C. F., Esq., The Orchard, Staines.
- 1920 EDWARDS, CARL, Esq., Woodlesford, Leeds.
- 1918 EIDLITZ, ROBERT JAMES, Esq., 755 Park Avenue, New
York, U.S.A.
- 1893 ELLIOTT, E.A., Esq., 41 Chapel Park Road, St. Leonards-on-Sea.
- 1920 EMPEDOCLES, G., Esq., 34 Academy Street, Athens, Greece.
- 1872 *EVANS, SIR ARTHUR J., M.A., D.Litt., LL.D., Ph.D.,
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near Oxford.
- 1892 *EVANS, LADY, M.A. (Oxon.), 9 Kensington Park Gardens,
W. 11, *Foreign Secretary*.
- 1905 FAIRBAIRN, SIDNEY H., Esq., M.A., M.D., 11 Bolton Gardens,
S.W. 10.
- 1904 *FARQUHAR, MISS HELEN, 6 Lowndes Street, S.W. 1.
- 1921 FAULKNER, W. J., Esq., Sutton House, Endon, Stoke-on-
Trent.

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- 1902 FENTIMAN, HARRY, Esq., Murray House, Murray Road, Ealing Park, W. 5.
- 1910 FISHER LIBRARY, THE, University, Sydney, N.S.W.
- 1908 FITZWILLIAM MUSEUM, The Curator, Cambridge.
- 1901 FLETCHER, LIONEL LAWFORD, Esq., Norwood Lodge, Tupwood, Caterham.
- 1898 FORRER, L., Esq., Helvetia, 14 Homefield Road, Bromley, Kent.
- 1928 FORRER, L., Esq., JUNR., Fair Mead, Bayham Road, Sevenoaks, Kent.
- 1894 *FOSTER, JOHN ARMSTRONG, Esq., F.Z.S., Chestwood, near Barnstaple.
- 1896 *FRY, CLAUDE BASIL, Esq., Hannington Hall, Highworth, Wilts.
- 1897 *GANS, LEOPOLD, Esq., 207 Maddison Street, Chicago, U.S.A.
- 1912 GANTZ, REV. W. L., M.A., C.F., 22 Langbourne Mansions, N.6.
- 1871 GARDNER, PROFESSOR PERCY, M.A., D.Litt., Litt.D., LL.D., F.S.A., F.B.A., 12 Canterbury Road, Oxford.
- 1907 GARDNER, WILLOUGHBY, Esq., D.Sc., F.S.A., F.R.G.S., F.L.S., Y Berffa, Deganwy, North Wales.
- 1889 GARSIDE, HENRY, Esq., 46 Queen's Road, Teddington, Middlesex.
- 1928 GAVIN, REV. CANON GORDON HAY, The Vicarage, Waitara, Taranaki, New Zealand.
- 1913 GILBERT, WILLIAM, Esq., M.S.A., 74 Broad Street Avenue, E.C. 2.
- 1916 GILLIES, WILLIAM, Esq., 204 West George Street, Glasgow.
- 1922 GILLINGHAM, HARROLD E., Esq., 432 West Price St., Philadelphia, U.S.A.
- 1920 GINORI, MARCHESE ROBERTO VENTURI, 75 Via della Scala, Florence, Italy.
- 1906 GLOUCESTER, THE RIGHT REV. THE LORD BISHOP OF, The Palace, Gloucester.
- 1894 GOODACRE, HUGH, Esq., Ullesthorpe Court, Lutterworth, Leicestershire.
- 1904 GRAHAM, T. HENRY BOILEAU, Esq., F.S.A., Oxford and Cambridge Club, Pall Mall, S.W. 1.
- 1891 *GRANTLEY, LORD, D.L., J.P., F.S.A., Weeke Manor, Winchester, Hants.
- 1914 GROSE, S. W., Esq., M.A., 18 Hobson Street, Cambridge.
- 1910 GUNN, WILLIAM, Esq., 19 Swan Road, Harrogate.

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- 1916 HAINES, GEOFFREY COLTON, Esq., Green Gable, Balmuir Gardens, S.W. 15, *Treasurer*.
- 1899 HALL, HENRY PLATT, Esq., Pentreheylin Hall, Llanymynech, Montgomeryshire.
- 1904 HARRISON, FREDERICK A., Esq., F.Z.S., Sunnyside, Fourth Avenue, Frinton-on-Sea, *Librarian*.
- 1916 *HART, R. EDWARD, Esq., M.A., Brooklands, Blackburn.
- 1928 HAYTER, G. C. F., Esq., B.A., F.S.A., 40 Arkwright Road, Hampstead, N.W. 3.
- 1886 *HENDERSON, JAMES STEWART, Esq., F.R.G.S., M.R.S.L., M.C.P., 1 Pond Street, Hampstead, N.W. 3.
- 1929 HERRICK, FREDERICK M., Esq., 43 Exchange Place, New York, U.S.A.
- 1930 HERZFELDER, HUBERT, Esq., 70 Redington Road, N.W. 3.
- 1900 HEWLETT, LIONEL M., Esq., Greenbank, Byron Hill, Harrow-on-the-Hill, Middlesex.
- 1893 HILL, GEORGE FRANCIS, Esq., C.B., M.A., LL.D., Litt.D., F.S.A., F.B.A., *Keeper of Coins*, British Museum, W.C. 1.
- 1895 HODGE, THOMAS, Esq., Fyning House, Rogate, Petersfield, Hants.
- 1920 *HOLROYD, MICHAEL, Esq., M.A., F.S.A., Brasenose College, Oxford.
- 1921 HUBBARD, WING-COMMANDER T. O'BRIEN, M.C., R.A.F., Hinaidi, Irak.
- 1908 *HUNTINGTON, ARCHER M., Esq., Governor of the American Numismatic Society, Audubon Park, 156th Street, West of Broadway, New York, U.S.A.
- 1922 JAMESON, M. R., 38 Rue de Provence, Paris.
- 1922 JOHNSON, COLONEL SIR ROBERT A., K.B.E., T.D., M.A., Deputy Master, The Royal Mint, E. 1.
- 1911 JOHNSTON, LEONARD P., Esq., The Cottage, Warningcamp, Arundel, Sussex.
- 1926 KENT NUMISMATIC SOCIETY, THE, Brewer Street, Maidstone.
- 1874 *KENYON, R. LLOYD, Esq., M.A., J.P., D.L., Pradoc, West Felton, Salop.
- 1914 *KEBB, ROBERT, Esq., M.A., Royal Scottish Museum, Edinburgh.
- 1920 KING, COLONEL E. J., C.M.G., M.A., F.S.A., The Old House, East End Road, N. 2.
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 The University, Mysore.
- 1917 LAMB, MISS WINIFRED, Holly Lodge, Campden Hill, W. 8.
 1920 LAST, H. M., Esq., M.A., St. John's College, Oxford.
 1885 *LAWRENCE, L. A., Esq., F.S.A., 44 Belsize Square, N.W. 3.
 1883 *LAWRENCE, RICHARD HOE, Esq., Fifth Avenue Bank, New
 York, U.S.A.
 1920 LEWIS, JOHN CAMPBELL, Esq., Bridge House, Troedyrhiw,
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 1930 LINCOLN, F. W., Esq., 69 New Oxford Street, W.C. 1.
 1922 LLOYD, ALBERT H., Esq., Ph.D., F.S.A., St. John's House,
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 1922 *LLOYD, MISS MURIEL ELEANOR HAYDON, St. John's
 House, 73 Grange Road, Cambridge.
 1907 LOCKETT, RICHARD CYRIL, Esq., J.P., F.S.A., 58 Cadogan
 Place, S.W. 1.
 1911 LONGMAN, W., Esq., F.S.A., 27 Norfolk Square, W. 2.
 1924 DE LOREY, M. EUSTACHE, 46 Avenue du Président Wilson,
 Paris XVI.
 1921 LUCKNOW MUSEUM, The Curator of the, Lucknow, India.
 1893 LUND, H. M., Esq., Waitara, Taranaki, New Zealand.
- 1895 MACDONALD, SIR GEORGE, K.C.B., M.A., LL.D., D.Litt.,
 F.B.A., 17 Learmonth Gardens, Edinburgh.
 1901 MACFADYEN, FRANK E., Esq., 17 St. George's Terrace,
 Newcastle-on-Tyne.
 1923 MALLINSON, REV. ARNOLD, 2 Abbey Road, Oxford.
 1912 MATTINGLY, HAROLD, Esq., M.A., British Museum, W.C. 1.
 1905 MAVROGORDATO, J., Esq., Gilridge, Cowden Pound, Eden-
 bridge, Kent.
 1901 McDOWALL, REV. STEWART A., 5 Kingsgate Street, Win-
 chester.
 1929 McNICKLE, A. J. S., Esq., c/o Royal Mail Steam Packet Co.,
 Royal Mail House, E.C. 2.
 1916 MEIGH, ALFRED, Esq., Dole Spring House, Forsbrook,
 Stoke-on-Trent.
 1905 MESSENGER, LEOPOLD G. P., Esq., 151 Brecknock Road,
 Tufnell Park, N. 19.
 1928 MIDDLETON, LAWRENCE H., Esq., M.A., 11 A High Street,
 N.W. 8.
 1929 MILBANK, S. R., Esq., Panfield, Huntingdon, New York, U.S.A.

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- 1924 MILLER, HOYT, Esq., East Shore Road, Great Neck, Long Island, New York, U.S.A.
- 1897 MILNE, J. GRAFTON, Esq., M.A., 20 Bardwell Road, Oxford.
- 1921 MILNE, MRS. J. GRAFTON, 20 Bardwell Road, Oxford.
- 1910 MITCHELL LIBRARY, THE, Glasgow, The Librarian.
- 1898 *MONCKTON, HORACE W., Esq., F.L.S., F.G.S., 3 Harcourt Buildings, Temple, E.C. 4, and Whiteclairn, Wellington College Station, Berks.
- 1888 MONTAGUE, LIEUT.-COL. L. A. D., Penton, near Crediton, Devon.
- 1879 MORRIESEN, LIEUT.-COL. H. W., F.S.A., F.R.S.A., 42 Beaufort Gardens, S.W. 3.
- 1904 MOULD, RICHARD W., Esq., Newington Public Library, Walworth Road, S.E. 17.
- 1916 *MYLNE, EVERARD, Esq., St. Andrew's College, Grahamstown, South Africa.
- 1909 NAGG, STEPHEN K., Esq., 1621 Master Street, Philadelphia, U.S.A.
- 1928 *NAVILLE, MONSIEUR LUCIEN, 5-7 Rue Lévrier, Geneva.
- 1906 NEWBERRY LIBRARY, The Librarian, Chicago, U.S.A.
- 1905 *NEWELL, E. T., Esq., President of the American Numismatic Society, 156th Street, West of Broadway, New York, U.S.A.
- 1930 NORTHUMBERLAND, THE DUKE OF, 17 Princes Gate, S.W. 7.
- 1916 OGLE, CHRISTOPHER, Esq., M.A., Austin Friars House, E.C. 2.
- 1882 OMAN, PROFESSOR SIR CHARLES, M.P., K.B.E., M.A., D.C.L., LL.D., F.S.A., F.B.A., All Souls College, Oxford, *Vice-President*.
- 1925 OMAN, CHARLES CHICHELE, Esq., M.A., Victoria and Albert Museum, S.W. 7.
- 1911 OPPENHEIMER, HENRY, Esq., F.S.A., 9 Kensington Palace Gardens, W. 8.
- 1904 ORBELIANI, COL. PRINCE ROMAN, F.R.G.S., Empire Trust Co., 580 Fifth Avenue, New York City, U.S.A.
- 1922 PAKENHAM, IVO R. R. L., Esq., St. James's Club, 106 Piccadilly, W. 1.
- 1903 PARSONS, H. ALEXANDER, Esq., Dalmuir, Cedar Avenue, Rickmansworth.
- 1926 PEARCE, J. W. E., Esq., M.A., 10 Cromwell Place, S.W. 1.
- 1917 PHIPPS, LIEUT.-COL. P. RAMSAY, F.R.G.S., 17 St. James's Court, S.W. 1.

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- 1927 PINCHES, JOHN ROBERT, Esq., 21 Albert Embankment, S.E. 11.
- 1928 PIRIE GORDON, H., Esq., D.S.C., M.A., 46 Addison Avenue, W. 11.
- 1927 POND, SHEPARD, Esq., 258 Boylston Street, Boston, Mass., U.S.A.
- 1923 PRAGUE, Bibliothèque de l'Université, Czecho-Slovakia.
- 1903 PRICE, HARRY, Esq., Arun Bank, Pulborough, Sussex.
- 1913 RAO, K. ANANTASAMI, Esq., Curator of the Government Museum, Bangalore, India.
- 1890 RAPSON, PROFESSOR E. J., M.A., M.R.A.S., 8 Mortimer Road, Cambridge.
- 1923 RAVEL, MONSIEUR O., 7 Bd. de Lorraine, Pointe Rouge, Marseilles.
- 1930 RAWSON, L. H., Esq., Atholl Bank, Lovelace Road, Surbiton.
- 1909 RAYMOND, WAYTE, Esq., 489 Park Avenue, New York City, U.S.A.
- 1903 REGAN, W. H., Esq., 79 Westbourne Grove, W. 2.
- 1876 *ROBERTSON, J. DRUMMOND, Esq., M.A., Comrie Lodge, Higher Warberry Road, Torquay.
- 1911 *ROBINSON, E. S. G., Esq., M.A., F.S.A., 23 Upper Phillimore Gardens, W. 8.
- 1910 ROGERS, REV. EDGAR, O.B.E., M.A., F.S.A., 5 Essex Villas, W. 8.
- 1928 ROGERS, KENNETH, Esq., O.B.E., M.D., Namouna, 25 West-cliff Road, Bournemouth.
- 1919 †ROSE, EDWARD E. PILKINGTON, Esq., I.C.S., Loughton, Essex.
- 1924 ROWE, CAPTAIN FRANCIS G. C., Ebrington Barracks, Londonderry.
- 1903 RUBEN, PAUL, Esq., Ph.D., Alte Rabenstrasse 8, Hamburg, Germany.
- 1919 RYAN, V. J. E., Esq., Le Grand Hôtel, Montreux-Territet, Switzerland.
- 1916 SAINT LOUIS NUMISMATIC SOCIETY, Washington University, St. Louis, Mo., U.S.A.
- 1872 *SALAS, MIGUEL T., Esq., 247 Florida Street, Buenos Ayres.
- 1916 *SALISBURY, F. S., Esq., M.A., Dorset House, Parkland Grove, Ashford, Middlesex.
- 1919 SAVAGE, W. LISLE, Esq., 11 Faith Street, Maidstone, Kent.
- 1917 SEABY, B. A., Esq., Oxford Circus House, W. 1.

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- 1907 *SELTMAN, CHARLES T., Esq., M.A., 39 Barton Road, Cambridge.
- 1890 SELTMAN, E. J., Esq., Villa Maria, S. Giorgio a Cremano, Naples.
- 1913 SHIRLEY-FOX, J. S., Esq., R.B.A., 3 Lansdown Crescent, Bath.
- 1893 *SIMS, BRIG.-GENERAL R. F. MANLEY, C.M.G., D.S.O., 163 Strand, W.C. 2.
- 1896 SINHA, KUMVAR KUSHAL PAL, M.A., RAIS OF KOTLA, Kotla, Agra, India.
- 1918 *SLIGO, THE MARQUESS OF, F.S.A., F.R.G.S., 7 Upper Belgrave Street, S.W. 1.
- 1905 SNELLING, EDWARD, Esq., 26 Silver Street, E.C. 2.
- 1930 SNIJDER, PROFESSOR G. A. S., Allard Pierson Stichting, Weesperzijde 33, Amsterdam (O.).
- 1909 SOUTZO, M. MICHEL, 8 Strada Romana, Bucharest.
- 1922 SPENCER-CHURCHILL, CAPT. E. G., M.C., F.S.A., Northwick Park, Blockley, Worcestershire.
- 1925 SPINK, MARTIN S., Esq., M.A., 5-7 King Street, S.W. 1.
- 1894 SPINK, SAMUEL M., Esq., 5-7 King Street, S.W. 1.
- 1902 STAINER, CHARLES LEWIS, Esq., Woodhouse, Ilfley, Oxford.
- 1922 STARKEY, W. BEAMONT, Esq., Lyonsdown, Ilfracombe.
- 1928 STEBBING, W. P. D., Esq., F.S.A., Fiveways, Deal.
- 1914 *STREATFEILD, MRS. SYDNEY, 22 Park Street, W. 1.
- 1910 SUTCLIFFE, ROBERT, Esq., 21 Market Street, Burnley, Lancs.
- 1914 SYDENHAM, REV. EDWARD A., M.A., The Vicarage, West Molesey, Surrey.
- 1885 SYMONDS, HENRY, Esq., F.S.A., 19 Ellenborough Park N., Weston-super-Mare.
- 1896 *TAFPS, H. W., Esq., 35 Greenholm Road, Eltham, S.E. 9.
- 1879 TALBOT, COL. THE HON. MILO G., C.B., Bifrons, Canterbury.
- 1919 TARAPOREVALA, VICAJI D. B., Esq., Sunama House, 140 Cumballa Road, Bombay.
- 1917 TAYLOR, GLEN A., Esq., F.S.A., 63 Lewis Road, Neath, Glamorgan.
- 1887 THAIRLWALL, F. J., Esq., 12 Upper Park Road, N.W. 3.
- 1925 THOMAS, CECIL, Esq., 7 Gloucester Terrace, S.W. 7.
- 1920 THOMAS, J. ROCHELLE, Esq., 18 Ilchester Place, W. 14.
- 1918 THORBURN, PHILIP, Esq., B.A., 49 South Side, Clapham Common, S.W. 4.

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- 1929 TORONTO, University of, The Librarian, Canada.
- 1894 TRIGGS, A. B., Esq., 33 Macquarie Place, Sydney, New South Wales.
- 1912 VAN BUREN, DR. A. W., American Academy, Porta San Pancrazio, Rome.
- 1916 VANES, REV. J. A., Morton House, Cheddleton, Leek, Staffs.
- 1899 VLASTO, MICHEL P., Esq., 12 Allée Léon Gambetta, Marseilles, France.
- 1923 WALES, THE NATIONAL MUSEUM OF, Cardiff.
- 1924 WALLWORTH, I. N. G., Esq., Fairbanks, Stanley Park Road, Carshalton.
- 1897 WALTERS, FREDK. A., Esq., F.S.A., 28 Great Ormonde Street, W.C. 1, and St. Mildred's, Temple Ewell, Dover, *Honorary Secretary*.
- 1911 WARRE, FELIX W., Esq., O.B.E., M.C., 128 Church Street, W. 8.
- 1920 *WATSON, COMMANDER HAROLD NEWALL, R.N., Belmont, 10 Curzon Park, Chester.
- 1901 *WATTERS, CHARLES A., Esq., Springfields, Park Road, Hayton, Liverpool.
- 1917 WATTS, GERALD A., Esq., Drumlerry, Londonderry.
- 1901 WEBB, PERCY H., Esq., M.B.E., 4 and 5 West Smithfield, E.C. 1, *President*.
- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 13 Harley Street, W. 1.
- 1899 WELCH, FRANCIS BERTRAM, Esq., B.A., Penyllan, Gadshill Road, Charlton Kings, Gloucestershire.
- 1920 *WHEELER, ERNEST H., Esq., 36 Shepherds Hill, N. 6.
- 1915 WHITEHEAD, R. B., Esq., M.A., M.R.A.S., I.C.S. (retd.), 30 Millington Road, Cambridge.
- 1908 WILLIAMS, T. HENRY, Esq., 15 Stanwick Road, W. 14.
- 1910 WILLIAMS, W. I., Esq., Bryn Deri, Hereford Road, Aber-gavenny.
- 1906 WOOD, HOWLAND, Esq., Curator of the American Numismatic Society, 156th Street, W. of Broadway, New York, U.S.A.
- 1920 WOODWARD, W. H., Esq., 39 Harley House, N.W. 1.
- 1920 *WOODWARD, A. M. TRACEY, Esq., Chinese P.O. Box No. 1044, Shanghai, China.
- 1903 WRIGHT, H. NELSON, Esq., I.C.S. (retd.), 42 Ravenscroft Avenue, N.W. 11.

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- 1920 WYMAN, ARTHUR CRAWFORD, Esq., 29 Place Dauphine,
Paris I.
- 1922 YOANNA, A. DE, Esq., B.A., M.D., 111 Pierrepont Street,
Brooklyn, New York, U.S.A.
- 1880 YOUNG, ARTHUR W., Esq., 12 Hyde Park Terrace, W. 2.
- 1919 ZIEGLER, PHILIP, Esq., Lilly Villa, Victoria Park,
Manchester.

HONORARY FELLOWS

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- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY,
Palazzo Quirinale, Rome.
- 1930 ALFÖLDI, PROFESSOR ANDREAS, 8 Baross, N. 15, Budapest.
- 1903 BAHRFELDT, GENERAL DER INFANTERIE A. D., PROFESSOR
MAX VON, Dr.Phil., Zinksgarten-Strasse 2, Halle (Saale),
Germany.
- 1898 BLANCHET, M. ADRIEN, Membre de l'Institut, 10 Bd.
Émile Augier, Paris XVI.
- 1926 DIEUDONNÉ, MONSIEUR A., Conservateur des Médailles,
Bibliothèque Nationale, Paris.
- 1899 GABRICI, PROFESSOR DR. ETTORE, Via Formale 30, Naples.
- 1904 KUBITSCHKE, PROFESSOR J. W., Pichlergasse 1, Vienna IX.
- 1893 LOEBBECKE, HERR A., Cellerstrasse 1, Brunswick.
- 1904 MAURICE, M. JULES, 15 Rue Vaneau, Paris VII.
- 1899 PICK, DR. BEHRENDT, Münzkabinett, Gotha.
- 1926 TOURNEUR, M. VICTOR, Conservateur des Médailles, Biblio-
thèque Royale, Brussels.

MEDALLISTS

OF THE ROYAL NUMISMATIC SOCIETY

ELECTED

- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
- 1884 AQUILLA SMITH, Esq., M.D., M.R.I.A.
- 1885 EDWARD THOMAS, Esq., F.R.S.
- 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
- 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
- 1888 DR. F. IMHOOF-BLUMER, Winterthur.
- 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
- 1890 MONSIEUR J. P. SIX, Amsterdam.
- 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
- 1892 PROFESSOR R. STUART POOLE, LL.D.
- 1893 M. W. H. WADDINGTON, Sénateur, Membre de l'Institut, Paris.
- 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
- 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
- 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
- 1897 DR. ALFRED VON SALLET, Berlin.
- 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
- 1899 M. ERNEST BABELON, Membre de l'Institut, Paris.
- 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
- 1901 S. E. BARON WLADIMIR VON TIESENHAUSEN, St. Petersburg.
- 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A.
- 1903 M. GUSTAVE SCHLUMBERGER, Membre de l'Institut, Paris.
- 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
- 1905 SIR HERMANN WEBER, M.D.
- 1906 COMM. FRANCESCO GNECCHI, Milan.
- 1907 BARCLAY V. HEAD, Esq., D.Litt., D.C.L., Ph.D., Corr. de l'Inst.
- 1908 PROFESSOR DR. HEINRICH DRESSLER, Berlin.
- 1909 HERBERT A. GRUEBER, Esq., F.S.A.
- 1910 DR. FRIEDRICH EDLER VON KENNER, Vienna.
- 1911 OLIVER CODRINGTON, Esq., M.D., M.R.A.S., F.S.A.
- 1912 GENERAL-LEUTNANT MAX VON BAHRFELDT, Hildesheim.
- 1913 GEORGE MACDONALD, Esq., M.A., LL.D.
- 1914 JEAN N. SVORONOS, Athens.
- 1915 GEORGE FRANCIS HILL, Esq., M.A.
- 1916 M. THÉODORE REINACH, Membre de l'Institut, Paris.
- 1917 L. A. LAWRENCE, Esq., F.S.A.
- 1918 Not awarded.
- 1919 M. ADRIEN BLANCHET, Membre de l'Institut, Paris.
- 1920 H. B. EARLE-FOX, Esq., and J. S. SHIRLEY-FOX, Esq.
- 1921 PERCY H. WEBB, Esq.
- 1922 FREDERICK A. WALTERS, Esq., F.S.A.
- 1923 PROFESSOR J. W. KUBITSCHKE, Vienna.
- 1924 HENRY SYMONDS, Esq., F.S.A.
- 1925 EDWARD T. NEWELL, Esq., New York.
- 1926 R. W. MACLACHLAN, Esq., Montreal.
- 1927 M. A. DIEUDONNÉ, Paris.
- 1928 SIR CHARLES OMAN, K.B.E., M.P., D.C.L., F.B.A.
- 1929 MONSIEUR JULES MAURICE, Paris.
- 1930 REV. EDWARD A. SYDENHAM, M.A.

PROCEEDINGS OF THE
ROYAL NUMISMATIC SOCIETY.

PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1929—1930.

OCTOBER 17, 1929.

PROF. SIR CHARLES OMAN, K.B.E., M.P., D.C.L., LL.D.,
F.S.A., F.B.A., President, in the Chair.

The Minutes of the Meeting of May 16 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. S. W. Grose, Catalogue of the McClean Collection, Vol. iii.
2. F. F. Kraus, Die Münzen Odovacars; *from the Author*.
3. A. Patrignani, Le Medaglie di Gregorio XVII; *from the Author*.
4. Antiquaries Journal, 1929, Pts. 3-4.
5. Archaeologia Aelianna, for 1929.
6. British Museum Quarterly, Vol. iv, Pt. 1.
7. Journal of Hellenic Studies, 1929, Pt. 1.
8. Proceedings of the Cambridge Antiquarian Society, 1929.
9. Revue Numismatique, 1929, Pts. 1 and 2.
10. Syria, Vol. x, Pt. 2.
11. Zeitschrift für Numismatik, 1929, Pts. 1-3.

Mr. William Gilbert exhibited a rare aureus of Crispina (Cohen 39) in very fine condition.

Mr. S. H. Chapman showed a very fine specimen of an Ascalon tetradrachm of Cleopatra.

Mr. Fredk. A. Walters, F.S.A., showed an Exeter shilling of Charles I undated: obverse from an altered Oxford die,

reverse of usual Exeter type. He also showed a sestertius of Agrippina Junior, wife of Claudius. *Obv.*: AGRIPPINA AVG GERMANICI F CAESARIS AVG; *rev.*: no S.C.; of highest rarity—not in Cohen. Only other recorded specimens are in the Berlin and Sofia Museums. Illustrated from the former in B.M. Catalogue.

Mr. Martin Spink exhibited a forged denarius of Augustus and Agrippa, struck by the moneyer Cossus Lentulus. The falsity of this piece is confirmed by the closed p's in Agrippa on the reverse. He also showed a demi hardi d'or of Richard II struck probably at Bordeaux. This piece differs from the types known to Hewlett; reverse legend is like his type 3, reading **DOMIN** and with no mint letter, but with leopard in second and third angles as in his type 2.

Mr. Mattingly read two notes by Mr. Robinson and himself on problems of the Hannibalic age.

In the first, he attempted to show that the Barcids inaugurated a silver coinage in Spain, which was continued by the Romans, when Scipio captured New Carthage; that the Melcarth, bearded and unbearded, on the Carthaginian silver, may preserve the features of Hamilcar and Hannibal, and that a new obverse type, succeeding the unbearded Melcarth, is probably a portrait of Scipio Africanus. Confirmation of this view was sought in a rare copper coin of Canusium with the same portrait—probably struck at the end of the Second Punic War and preserving the memory of Scipio's exploit at Canusium in 216 after Cannae, when he broke up a defeatist plot.

In the second note the coins with Oscan legend of Capua, Calatia and Atella were passed in review. It was pointed out that the local names in Oscan, while natural enough during the revolt against Rome, 215–211, are highly surprising at any time, as, in law, the communities enjoyed Roman citizenship. The whole series was therefore attributed to the revolt, and strong support for this view was found in overstrikes of Atellan bronze on Roman, compared with similar overstrikes of Carthaginian bronze of Hannibal in South Italy.

In the discussion that followed Sir Charles Oman and Mr. Hallward took part.

NOVEMBER 21, 1929.

PROF. SIR CHARLES OMAN, K.B.E., M.P., D.C.L., LL.D.,
F.S.A., F.B.A., President, in the Chair.

The Minutes of the Meeting of October 17 were read and approved.

Mr. L. G. P. Messenger exhibited two second brass of Galba and a sestertius of Titus, all new varieties.

Mr. Percy H. Webb showed a selection of the antoniniani of Probus, showing the great variety of obverses used in the mints of their reign, including a number with the bust to left seen from back, which are rare.

Mr. William Gilbert showed an aureus of Elagabalus (Cohen 229) *rev.* Roma Victrix seated, a rare coin in brilliant condition.

Rev. Edgar Rogers, F.S.A., showed a bronze medal of Alof de Wignacourt, Grand Master of the Order of the Hospital of St. John, dated 1610, the only known specimen, from the Attard collection.

Mr. Lionel L. Fletcher exhibited pattern copper tokens of 1 and $\frac{1}{2}$ puffin recently struck by the Birmingham mint for Mr. Harman, the owner of Lundy Island, and Russian 1 copeck copper of 1924 and 1 copeck bronze of 1927.

Mr. Martin Spink showed an antoninianus of Volusian, *rev.* PVDICITIA, and another of Pacatianus and a follis of Vetrano, *rev.* leg. IN HOC SIGNO VICTOR ERIS, and a denarius of Domitian with an hitherto unrecorded date IMP XX, all from the Nordheim collection.

The President read a paper entitled "The First Forth Bridge, A.D. 209", in which he discussed an unique second brass of Caracalla in the Bibliothèque Nationale, with *rev.* type a bridge of trestles supported on three galleys, over which two Emperors are walking followed by four standard bearers carrying cohort standards, and marching soldiers, some on horseback. The legend is TREIECTVS in the

exergue and the date TR. P. XII hitherto always read VII. Sir Charles Oman suggested that it commemorates an event in the sojourn of Severus and Caracalla in Britain, the crossing of the Forth. After discussing the scanty references in Herodian to this campaign and the various possible places for a crossing, Sir Charles suggested the probable site was near Alloa.

Mr. Mattingly, Dr. R. E. M. Wheeler, Mr. Webb, and Mr. Allan also spoke.

DECEMBER 19, 1929.

PROF. SIR CHARLES OMAN, K.B.E., M.P., D.C.L., LL.D.,
F.S.A., F.B.A., President, in the Chair.

The Minutes of the Meeting of November 21 were read and approved.

The Librarian of the University of Toronto was elected a Fellow of the Society, and Messrs. A. W. Davis, F. W. Lincoln, and L. H. Rawson were proposed for election.

Mr. H. Mattingly showed on behalf of Mr. Lawrence a sestertius of Hadrian with an altered reverse.

Mr. Fredk. A. Walters, F.S.A., showed three first brass of Marcus Aurelius (Cohen 1000, 503, and no. 1) and a second brass of the same type as 1000 but not recorded in the denomination.

Mr. Lionel L. Fletcher exhibited a souvenir medal of the German Prisoners of War Camp in the Isle of Man, 1914-16.

Mr. Percy H. Webb showed an aureus of Constantius Chlorus from the Arras Find.

Mr. F. A. Harrison showed a series of six scudos with portraits of the Medici Grand Dukes between 1567 and 1570.

Mr. William Gilbert exhibited an aureus of Constantius Chlorus (Cohen 306), and a quinarius of Constantine (Cohen 707), both from the Arras Find.

Sir Arthur Evans exhibited a fine series of gold coins and medallions in illustration of his paper.

Sir Arthur Evans read a paper entitled 'Some Notes on the Arras Find', in which he endeavoured to put on record all the information available about the circumstances of the find and to reconstruct the hoard as far as possible. He also dealt at some length with the more remarkable coins and medallions from the find. (This paper is printed in this volume of the *Chronicle*.)

JANUARY 17, 1930.

PERCY H. WEBB, Esq., M.B.E., Treasurer, in the Chair.

The Minutes of the Meeting of Dec. 19 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. Antiquaries Journal, 1930, Pt. 1.
2. Archaeologia Cantiana, Vol. xli.
3. Fifty-fourth Report of the Deputy Master of the Mint.
4. J. G. Milne, Ptolemaic Coinage in Egypt, *from the Author*.
5. Numismatische Zeitschrift, 1929.
6. Syria, Vol. x, Pt. 3.

Professor Andreas Alföldi was elected an Honorary Fellow of the Society, and Messrs. A. W. Davis, F. W. Lincoln, and L. H. Rawson were elected Fellows.

Mr. Gilbert exhibited a very fine aureus of Severus Alexander (Cohen 387).

Mr. Brooke read a paper on the "Privy Marks of Henry V" in which he emphasized the importance of the instructions, which consistently from the fourteenth century onwards formed a clause in the indenture of contract with Masters of the Mint, enjoining the Master to place a privy mark upon the coins of gold and silver.

The order formed part of the rules laid down for the placing of specimens in the pyxes for trial by the jurors of the pyx. The

pyxes were closed quarterly, and therefore the privy mark had to be changed four times a year. The recent find of gold nobles at Horsted Keynes had produced 17 specimens of the reign of Henry V, which together with existing specimens formed a good field for exploration of privy marks. In the earlier part of the reign a large number of minute varieties of lettering were found which, by their regular occurrence on coins of all denominations in both metals, were certainly used deliberately as marks of difference. In some cases individual letters were varied in size or shape; occasionally small mutilations were made in one particular letter, and sometimes one found these mutilations which were made on the letter-punches repaired on the dies in order to make further difference. Towards the close of the reign there was less variety in lettering and a considerable variety was introduced by the interchange of symbols such as annulet, mullet, trefoil, &c., on the field of the coins.

The regular and deliberate marking of the coins by these two successive methods is most likely to have been done on the Master's instructions by way of compliance with the order for the coins to be as his privy mark. The incidence of such changes was frequent, and they might well have taken place four times a year. (This paper is printed in this volume of the *Chronicle*, pp. 44-87).

FEBRUARY 20, 1930.

PERCY H. WEBB, Esq., M.B.E., Treasurer, in the Chair.

The Minutes of the Meeting of Jan. 17 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. British Museum Quarterly, Vol. iv, Pts. 2-3.
2. Fornvännen, 1929.
3. L. Forrer, Weber Catalogue, Vol. iii, Pt. 2.
4. Journal of the Royal Society of Antiquaries of Ireland, 1929, Pt. 2.
5. Mitteilungen d. deutsch. arch. Inst., 1929, Pts. 1-2.
6. Revue Suisse de Numismatique, Index Vols. i-xxiv.
7. Spink's Numismatic Circular, 1929.

The evening was devoted to exhibitions.

Mr. Henry P. Hall exhibited a remarkable series of the fleet coinage of Mark Antony and a very fine series of first brass of Hadrian and second brass of Commodus.

Mr. H. Nelson Wright showed nine mohurs struck at Agra in the last years of Akbar and early years of Jahangir, all rare and fine.

Mr. P. Thorburn exhibited a copper coin of Alam II of Akbarabad (Agra) of 1215 (1800) with the initials of John William Hessing, commander of the fort of Agra, and a mohur of Jodhpur of Jaswant-Singh and Victoria dated 1293 A.H. (A.D. 1876), mint-master Mumtaz Ali.

Mr. Percy H. Webb brought a series of sestertii in fine condition.

Mr. Lionel L. Fletcher exhibited a series of copper coins of Sicily and of Venice from the twelfth century onwards.

Mr. H. W. Taffs showed a series of Anglo-Saxon and Norman pennies of Kentish mints.

Mr. William Gilbert exhibited twelve Roman aurei for their rarity and fineness. They were of Nerva (Cohen 65), Trajan (C. 300), Hadrian (C. 406), Sabina (C. 78), Aelius (C. 11), Antoninus Pius (C. 581), Faustina I (not in Cohen *Augusta*), M. Aurelius (C. 416), Faustina II (C. 198), Lucius Verus (C. 247), Lucilla (C. 69), and Commodus (C. 567).

Dr. S. H. Fairbairn showed a medal of the French Revolution made of metal from church bells (*pur métal de cloche*) and another with anti-religious type—*mort au fanatisme et à la superstition*. He also exhibited a fine follis of Jovianus.

Mr. Fredk. A. Walters, F.S.A., exhibited two senatorial medallions of Alexander Severus, the larger probably a double sestertius and a dupondius of the same reign with *rev. RSTITVTOR MON.*

Mr. Walters also showed two sestertii of Annia Faustina: one formerly gilded and the other silvered in ancient times—the latter has been mounted in outer circle and is struck

in two metals. Both are from the same dies. 2. A brass of Annia Faustina of extreme rarity, also one of Elagabalus with *rev.* portrait of Annia Faustina (unpublished).

Mr. L. A. Lawrence, F.S.A., showed three dupondii of Hadrian of orichalcum and an *as* in copper and two dupondii of Faustina II in orichalcum to show the difference in the two metals.

Miss Helen Farquhar exhibited a badge of Charles, Prince of Wales, afterwards Charles II, evidently made after the death of Charles I, for the prince is represented with the crown suspended over his head (instead of the crowned portrait of the Restoration): probably about 1649-50. Charles is shown to left in armour, wearing the Garter riband—no legend on obverse, but the portrait, although not otherwise known, is unmistakable. Laurel branches at sides. The workmanship is rough, not unlike the Scottish Coronation Medal. The reverse, three crowns; sun emerging from cloud and the motto, "*Post Nubila Phœbus*", speaks for itself of the hoped-for Restoration. It was used by Elizabeth in 1588 on the defeat of the Armada. This badge was number 149 in the sale of the late Sir F. S. Powell, Bart., a very old collection left undisturbed for many years.

Mr. Henry Garside showed a British Imperial Sixpence dated 1878 with the obverse legend reading DRITANNIAR instead of BRITANNIAR, and a British Imperial Sovereign dated 1929 struck in the Royal Mint, Pretoria, South Africa, and bearing on the obverse the remodelled effigy of His Majesty King George V by Sir Bertram Mackennal.

MARCH 20, 1930.

PERCY H. WEBB, Esq., M.B.E., Treasurer, in the Chair.

The Minutes of the Meeting of February 20 were read and approved.

Mr. William Gilbert exhibited a 60-sestertii gold piece of the Roman Republic of about 220 B.C. *obv.*, bust of Mars, *rev.* eagle; a very rare coin in beautiful condition.

Mr. F. A. Harrison exhibited a representative series of Anglo-Saxon pennies.

Mr. Fredk. A. Walters, F.S.A., showed two half-crowns of Edward VI dated 1553: one is from an altered die of 1551 with galloping horse; the other from a special die with walking horse. Both are very rare, the king having died in July of this year, and coins of Mary must have been (from their numbers) struck almost immediately after her accession.

He also showed a profile groat of Henry VII (tentative issue) of shilling type, mm. cross-crosslet over lys; the lys, the usual mm. of the type, shows very clearly under the cross-crosslet the first mm. of the first ordinary profile type.

Major Carlyon-Britton showed the penny of Beorhtric and the large piece of Ethelred described in his paper, and Mr. Fred Baldwin showed a duplicate of the latter.

Major Carlyon-Britton read a paper on a penny of Beorhtric, king of Wessex, of the moneyer Peoethun, and gave his reasons for attributing this piece to this king instead of to a king of East Anglia as had been suggested by Haigh nearly seventy years ago in publishing what appeared to be this identical coin. (This paper is printed in this volume of the *Chronicle*, pp. 39-43.)

Major Carlyon-Britton also read a paper on a large silver coin, 1.3 inches in diameter, of Ethelred, Archbishop of Canterbury, comparable to the so-called offering-penny of Alfred, and suggested that these large pieces were probably evidence of an attempt to issue coins of a large denomination, such as shillings.

Mr. Brooke, Mr. Walters, and Mr. Webb also spoke.

APRIL 24, 1930.

PERCY H. WEBB, Esq., M.B.E., Treasurer, in the Chair.

The Minutes of the Meeting of March 20 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. Antiquaries Journal, Vol. x, Pt. 3.
2. Blanchet and Dieudonné, *Manuel de Numismatique Française*, Vol. iii.
3. Miss Helen Farquhar: The Shrewsbury Medal; Royal Charities, see Ser., Pt. 3; A Lost Coinage in the Channel Islands.
4. S. Minore, *Numismatica*.
5. Fr. Schjölth, *Chinese Currency*.
6. *Wörterbuch der Münzkunde*, ed. Frhr. von Schrötter.
7. *Zeitschrift für Numismatik*, Index Vols. xxi-xxxv.

Mr. L. L. Fletcher showed 25 and 50 ore and 1 krone of Greenland 1926, and a vulcanite token of Punta Arenas, Tierra del Fuego.

Mr. L. A. Lawrence, F.S.A., exhibited two barbaric copies of Republican denarii, one with the inscription *RAVIS* being probably Spanish.

Mr. Martin Spink showed a barbaric gold coin imitating an aureus of Marcus Aurelius, on the reverse a bust, probably of a Teutonic king.

Rev. E. A. Sydenham exhibited an extensive collection of denarii in illustration of his paper.

Rev. E. A. Sydenham read a paper entitled: "L. Calpurnius Piso and the coinage of the Roman Republic during the Social War."

The Marsic War, which broke out early in 90 B.C. and came to an end by the autumn of the following year, seriously imperilled the Republic and taxed its resources to the utmost. The abnormally large coinage necessitated by the war was issued mainly by L. Piso, and his coins give evidence of hurried production under disturbed conditions. Their main interest lies not so much in the occasion of their issue as in their elaborate system of mint-marks, which indicate the order in which his coins were issued and throw some light on the working of the mint. Piso's coinage falls into seven main groups or classes; of these I-IV (about five-sixths of the total) belong to a non-Roman mint and classes V-VII to Rome. On the coins of Classes I-IV the various

signs, numerals, &c., are used to distinguish individual dies, but this method is not adopted on Classes V-VII.

These two Mints A (Rome) and B (non-Roman) were operating throughout the period, and the coins issued at each are distinguished by style, fabric and, to some extent, by continuity of type.

The following points help to fix the chronology of the coinage:

(1) The type of *Roma crowned by Victory*, which first appears on the joint issue of C. Publius, A. Postumius and L. Metellus, was imitated by the Marsic insurgents on coins struck early in 90 B.C., thus the triumvirate must have held office about 91 B.C.

The coinage of Mint B is continued by Publius and Postumius striking separately, and as the earliest coins of L. Piso correspond closely with the later coins of Publius it is evident that they follow very closely upon them.

(2) The Lex Papiria was passed at the end of 90, or early in 89. The rare sestertii of L. Piso with the legend E.L.P. (e lege Papiria) are shown by their style to belong to his latest issues. Hence it follows that Piso held the office of moneyer at the time the law was passed and that a considerable part of his coinage must have been issued before January 89. Mr. Grueber gives a somewhat different dating; he also fails to perceive the close similarity in style and fabric between the coins of C. Publius and L. Piso, on which the whole question of mintage turns.

MAY 15, 1930.

PROF. SIR CHARLES OMAN, K.B.E., M.P., D.C.L., LL.D.,
F.S.A., F.B.A., President, in the Chair.

The Minutes of the Meeting of April 24 were read and approved.

Mr. W. A. Brooke was proposed for election as a Fellow of the Society.

The following Presents to the Society were announced and thanks ordered to be sent to their donors:

1. British Museum Quarterly, Vol. iv, Pt. 4.
2. L. Laffranchi: *Le Zecche dell'Italia superiore al tempo di Roma Imperiale and "Constantina" e "Constantia" from the Author.*

3. W. W. Tarn, *Seleucid-Parthian Studies*.

4. *Zeitschrift für Numismatik*, Vol. xxxix, Pt. 4.

Mr. G. C. Haines exhibited an unpublished silver medalion of Constantius II.

Obv. FL IVL CONSTANTIVS PF AVG. Bust diademed and draped to r.

Rev. GAVDIVM ROMANORVM: $\frac{|}{\text{TR}}$ Vexillum on which is VOT V MVLX and captive on either side.

The President showed a rare siliqua of Magnus Maximus *rev.* CONCORDIA and Lugdunum siliquæ from Gratian to Flavius Victor and Eugenius of curious style, with attenuated portraits.

Mr. H. P. Hall exhibited a fine tetradrachm of Antony and Cleopatra struck at Antioch.

Mr. C. J. Bunn showed solidi of Theodosius I and of Honorius in fine condition from the January Helbing sale.

Mr. William Gilbert exhibited a fine bronze coin (Maurice, *Num. Const.*, iii, Pl. X. 11) of Valens the usurper (*circa* A.D. 314) of the mint at Alexandria recently found in Africa, one of the rarest of Roman coins.

Mr. J. Allan exhibited on behalf of Mr. W. Bruce Bannerman, F.S.A., an unpublished token of:—NICHOLAS HATCHER: GROCERS ARMS IN CROYDEN: N H.

Messrs. G. C. Haines and L. G. P. Messenger were appointed to audit the Society's accounts.

Mrs. R. E. M. Wheeler read a paper on a hoard of minimi found at Lydney, Gloucestershire.

A hoard of 1646 coins and fragments of coins were found, in 1929, below and sealed by a rough cement repair to the late 4th century mosaic floor (Room xxxviii) of the bath-building in the Lydney (Gloucestershire) temple-settlement. It consisted of 148 clipped, broken, or segmental fragments of normal, semi-barbarous or barbarous Constantinian third brass, with *Gloria*

Exercitus, Victoriae DD Aug Q & M and *Fel. Temp. Reparatio* reverses, and, for the rest, a remarkable series of minimi and "minimissimi" ranging in average weight from 437 grs. to .056 gr. and in size (average diameter) from 7.5 to 2.5 mm. The greater percentage of these minims bore some part of a design struck from a die, in the majority of cases, obverse, head or bust, diademed or bare, right; reverse, some part of a *Fel. Temp. Reparatio* (legionary spearing fallen horseman). A smaller proportion may with probability be related to the same design, while the ascription of some few which may not derive from this type is at present uncertain. Archaeological evidence was forthcoming to give reasonableness to the tentative ascription of this hoard to the fifth century, and to suggest that it was part of a hitherto unrecognized currency system.

JUNE 19, 1930.

ANNUAL GENERAL MEETING.

PROF. SIR CHARLES OMAN, K.B.E., M.P., D.C.L., LL.D.,
F.S.A., F.B.A., President, in the Chair.

The Minutes of the Annual General Meeting of June 20, 1929, were read and approved.

Mr. W. A. Brooke was elected a Fellow of the Society.

Dr. G. H. Fairbairn and Mr. W. Gilbert were elected scrutineers of the ballot.

The following report of the Council was laid before the Society:

The Council have again the honour to lay before you their Annual Report on the state of the Royal Numismatic Society.

It is with deep regret that they have to announce the death of the following eight Fellows of the Society:

Armin Egger.	Henry Osborne O'Hagan.
Charles G. Gunther.	S. Mavrojani.
B. Wilfred Harris.	Alfred C. Montagu.
H. Drummond McEwen.	R. K. Walker.

They have also to report the resignation of the following Fellows:

G. C. Martin.	A. W. Poyser.
E. Nordheim.	L. E. Wills.

On the other hand, they have to report the election of one Honorary Fellow:

Professor Andreas Alföldi.

and of the following Ordinary Fellows:

W. A. Brooke, Esq.	F. W. Lincoln, Esq.
A. W. Davis, Esq.	The Librarian of Toronto
L. H. Rawson, Esq.	University.

The number of Fellows is therefore :

	Ordinary.	Honorary.	Total.
June, 1929	255	10	265
Since elected	5	1	6
	<hr/> 260	<hr/> 11	<hr/> 271
Deceased	8	—	8
Resigned	4	—	4
	<hr/> 248	<hr/> 11	<hr/> 259

The Council have also to report that they have awarded the Society's Medal to the Rev. Edward A. Sydenham, M.A., in recognition of his services to the study of Roman coins of the Republic and early Empire.

The Treasurer's Report, which follows, was then laid before the Meeting :

STATEMENT OF RECEIPTS AND DISBURSE-

FROM JUNE 1ST, 1929,

Dr.

THE SOCIETY IN ACCOUNT

	£	s.	d.
<i>To cost of Chronicles</i>	398	10	6
<i>„ Plates</i>	40	18	6
<i>„ Rent of Rooms</i>	50	0	0
<i>„ Refreshments, &c.</i>	6	5	1
<i>„ Lantern Expenses</i>	12	8	6
<i>„ Insurance</i>	1	10	0
<i>„ Bookbinding</i>	4	15	2
<i>„ Sundry Payments</i>	21	17	5
<i>„ Cost of £200 5 per cent. Conversion Loan</i>	200	0	0
	£736	5	2
<i>„ Balance carried forward—</i>	£	s.	d.
General Account	198	10	8
Research Account	3	19	3
	202	9	11
	£938	15	1

MENTS OF THE ROYAL NUMISMATIC SOCIETY
TO MAY 31st, 1930.

WITH PERCY H. WEBB, HON. TREASURER.

£r.

	£	s.	d.	£	s.	d.
<i>By Balance brought forward—</i>						
General Account	249	0	3			
Research Account	3	16	3			
				252	16	6
<i>By Subscriptions—</i>						
Ordinary	323	15	3			
Entrance Fees	6	6	0			
				330	1	3
<i>By Sales of Chronicles—</i>						
Current Numbers	100	17	6			
Old Numbers	10	8	3			
				111	5	9
<i>By Contribution to Plates</i>				3	2	0
<i>From War Stock Converted</i>				199	7	8
<i>By Dividends and Interest</i>				42	1	11
				£938	15	1

PERCY H. WEBB, *Hon. Treasurer.*

Audited and found correct,

LEOPOLD G. P. MESSENGER, }
G. C. HAINES, } *Hon. Auditors.*

June 11, 1930.

The Reports of the Secretary and Treasurer were adopted on the motion of the President.

Mr. Webb then read the following survey of his Treasurership.

To the Royal Numismatic Society.

Report of the Hon. Treasurer.

Mr. President, Council and Fellows of the Society.

I have not troubled you with a yearly report but, with your permission, I should like to say a few words at this annual meeting.

You did me the honour to appoint me your Treasurer in June 1906: I had acted as one of your Auditors for three years previously.

I received from my predecessor, the late Mr. W. C. Boyd, the account books of the Society from its formation in 1837 down to the end of his Treasurership. The early lists of members contain many names which are still fresh in our memories: Hawkins, Akerman, Wyon, Doubleday, Cuff, Bergue, Sotheby, and others.

The first year's account showed an income of £110 5s. 0d. subscribed by 105 original members. That year's expenditure was but £41 16s. 1d., but publications began in 1838 at a cost of £122 10s. 0d.

In one matter, at any rate, we have improved in our practice, for your officers, Secretaries and Treasurer, are proud that their positions are Honorary. In 1838 we paid £60 for the services of an Assistant Secretary and £14 9s. 0d. to a Collector of Subscriptions. Payments for Secretarial assistance were made for some years, and a 5 per cent. allowance to a Collector continued till 1902.

It was evidently intended that the Society should be a Collector, for cabinets were bought and a few coins acquired. We shall all, I think, agree that the abandonment of that intention was wise.

The Society's first purchase of stock was made in its second year and was of £67 3 per cent. Consols.

Mr. John Lee was the first Hon. Treasurer, and Messrs. Cuff, Bergne, Virtue, Freudenthal, Neck, and Copp successively held the office down to the appointment of Mr. Boyd in 1902.

In his day the invested funds reached £700 London & North Western Railway 4 per cent. Preference Stock, and so matters stood when I commenced my duties with a balance of £267 10s. 6d. in the Bank. The invested funds included Mr. Montagu's legacy of £60 applicable in aid of Research Work. The whole of that sum with dividends, except a little less than £4, has now been expended by payments out of our cash for such work, and all our investments are (subject to that small sum) now held on the Society's General Account. By various purchases our invested funds have been raised to £942 Stock which, on the amalgamation of the Railways, was converted into the like amount of 4 per cent. Preference Stock of the London Midland & Scottish Railway. It stands in the Society's name.

Our subsequent investments are now represented by £200 5 per cent. Consolidation Loan, which stands in the name of the Nominees of our Bankers, Westminster Bank Limited.

There was one moment, during the evil days brought about by the War, when I feared that it would be necessary to resort to our savings, but a small temporary advance from our Bank, made without interest, tided over the difficulty.

Until 1928 I was able to reclaim the Income Tax deducted from the interest, but, as the result of two regrettable decisions of the Courts, that advantage has ceased. It is held that our publications are not purely for the advancement of our science, but primarily for 'our own pleasure'. In the present financial position of the country we must not perhaps complain.

I have supplied the Editors with some statistics as to the

progress of expenditure on our publications. It is, of course, much more than in old, and even in immediately pre-war, days, but I think that, page for page, it will be found not to have increased as much as would appear at first sight. The relative cost of plates to letter-press has not done so, but tends to fall.

Our other expenditure has not materially increased. Our rooms now cost us £50 per annum, but, even in very early days, £30 was paid with extra gratuities in excess of those which we now pay. We do not increase our expenditure on refreshments.

Our floating cash balance is, after allowing for the £60 Research Fund, almost exactly that which I took over, for it stands at £202 9s. 11d.

A substantial reduction in the proceeds of our periodicals during last year accounts for the fact that it has fallen somewhat below that of the previous year. Some inquiry might perhaps be made into the method and cost of their sale.

In conclusion I may remind you that we have to take credit for the very valuable library of numismatic works which we have gradually acquired and are constantly increasing, and I think we may fairly say that the Society's financial position is sound.

The President proposed a vote of thanks to Mr. Webb for his services as Treasurer during the quarter of a century in which he had held the office.

The President then handed the Society's Medal to the Rev. Edward A. Sydenham and said :

Mr. Sydenham, it is always a source of pleasure to the Society when, having the whole numismatic world before it, as possible recipients of its medal of honour, it finds on due deliberation that one of its own members is, in this year, the most eligible candidate for the distinction. As you are aware, it can only be voted to the happy recipient by the unanimous voice of the Council, and not by a

majority only, as is the case with others not of our own body—a fact that makes it all the more honourable to the discerning mind. You are not one of our oldest members, for it was only in 1914 that we had the pleasure of welcoming you among us. But in the sixteen years that followed you have been not only one of the most frequent but one of the most valued contributors to our *Chronicle*. Your activities have ranged over the whole Roman series from the days of the heavy bronze of the Republic down to those of the decaying Empire. And in every subject on which you have touched, from the Libral As to the unique medallion of Constantine Junior, of which you are the happy possessor, you have contributed to the sum of numismatic knowledge. I can not sufficiently praise your power of historical research, and the lucidity with which you always present your conclusions. More especially must I note your facility in throwing new light on obscure phenomena of the Roman coinage, as displayed in your articles on the transitional issues between the coinage of Augustus in his earlier years and those of the time when he had standardized his imperial position, and in your recent article on the prolific coinage of the first years of the Social War, and your chronological rearrangement of the coinage of Nero. But above all must I congratulate the Society on the happy combination of your activities with those of our president-elect in the new *Corpus* of the Roman Imperial coinage, of which three volumes have already appeared. Cohen's great work has been going out of date as an authority for many years, and reprints of it (I think) are a mistake. What you are giving us, with the co-operation of the president-elect, is a work that will supersede Cohen as the Bible of the Roman numismatic student. I am delighted to hear that one more volume is now in the press, and congratulate you on the accomplishment of one more step toward the completion of this great work, a thing of international importance. Your efforts reflect glory on the old Society which is so proud to own you as one of its members, and now as one of its medallists.

Mr. Sydenham said :

Mr. President and Fellows of the Royal Numismatic Society.

I thank you most sincerely for the honour you have conferred on me by the award of the Society's medal, and I need scarcely say how keenly I appreciate it.

You, Sir, have spoken very kindly of my modest efforts in Numismatics, in which I venture to think you have discovered merits beyond my deserving. I prefer to regard this medal as a recognition of zeal rather than of achievement, for when I survey the work that I have done I feel painfully conscious of how small has been my actual contribution to the Science of Numismatics. Of my zeal I need not be so modest. For the greater part of my life I have been an ardent student and collector of Roman coins; and, had I more time, beyond that occupied by many other duties and interests, perhaps I might have increased the bulk of my Numismatic work.

The study of coins has at any rate revealed to me that our ignorance of them vastly exceeds our knowledge. That illusive thing called Truth is only discovered after infinite labour, and even then is not always recognized. Beyond us lie countless problems as yet unsolved, which will make the interest in Numismatics live for many generations.

It is indeed gratifying to possess this beautiful medal and the honour that accompanies it. But to me by no means the least gratifying feature is that I receive it from the hands of our worthy President, Sir Charles Oman. May I add a word of sincere appreciation of the splendid work that you, Sir, have done for the Royal Numismatic Society during the ten years in which you have presided over its meetings; to which I would add my personal thanks for the friendship that has sprung from our mutual interest in the 'Sacra Moneta' of Rome.

The President then delivered the following Address :

THE PRESIDENT'S ADDRESS.

WE have this year to deplore the deaths of eight Fellows of the Society, a number slightly over the average. Fortunately we have not to number in the list many of that select band who keep our meetings alive, and contribute to the pages of the *Chronicle*. Only two of them were known to me personally—Armin Egger, the head of the famous old numismatic firm in the Vienna Ringstrasse, a courteous old gentleman, with whom it was always a pleasure to deal, and Mr. Drummond McEwen, a regular attender at our meetings and occasional contributor to the *Chronicle*, who was specially interested in Semitic epigraphy. Mr. R. K. Walker was a very old member—he lived in Dublin and was interested, naturally, in the Irish coinage. He had been with us since 1883, but never (I believe) figured as a writer in the *Chronicle*. Mr. Henry O'Hagan, a financier in the City, had a fine collection of Greek, English, and Continental coins which were sold in 1907 and 1908 at Sotheby's. Mr. Wilfred Harris, a Birmingham member, had more general interests, and may be described as a miscellaneous collector. Mr. Alfred C. Montagu—a nephew of the famous Montagu a former Vice-President of the Society, who formed the celebrated collections of English coins and of Roman gold—was a specialist in War Medals, and had gathered a fine series which was dispersed by Messrs. Glendining in 1926. Mr. Charles Gunther, a young American archaeologist, had worked at excavations in Cyprus, where naturally he became interested in the copious currencies of the old Greek and Phoenician colonies. Capt. Mavrojani, who died last December, had a fine Greek collection. We pay the proper tribute of regret to eight representative members of the rank and file of our Society—the class whose interest in coins (and incidentally their subscriptions) enables the specialist to see his papers printed, and to get at our meetings the joy of intellectual battle with his peers on some point of artistic execution or of chronology.

I do not think that this last year has been one of outstanding importance in numismatic history at large. There have been a fair amount of finds of hoards recorded, mostly Roman, from Llangarren, Cirencester, &c.; but the one which excited my interest in the highest degree was not to be taken seriously. It was one in Lombardy, recorded in large type in a May issue of the *Morning Post*, wherein an Italian correspondent informed the Editor that a recently excavated pot contained silver coins of several of the seven kings of Rome. There were pieces of Romulus himself, under the name Quirinus, of Numa Pompilius, and of Ancus Marcius, "and others extending down to the Emperor Julius Caesar". Oddly enough there were mixed with these denarii some ancient Egyptian money of large size. The humour of being asked to believe in a coin-find containing pieces ranging over 700 years, and including denarii two hundred years older than the first coins ever issued, was sufficiently entertaining. But the archaeological interest lay in detecting the fact that the discoverer had obviously come upon a hoard of republican denarii of about the year 45 B.C., containing the coins of the Marcius, Memmius, and Calpurnius, who placed on the obverse of their issues the supposed portraits and names of the old kings with whom they claimed connexion. Mixed with these would be very naturally a few coins of Julius Caesar, struck in the same period, also apparently a few tetradrachms of the latest Ptolemies, which must be the "Egyptian" money mentioned by the journalist. There was some correspondence in the *Morning Post* about this find—but it was conducted by three gentlemen who did not go into the absurdity of attributing coins to Romulus or Numa, but controverted each other on the point as to whether it was correct or not to style Julius Caesar a "Roman Emperor". The whole humour of the original announcement of the discovery had passed over the heads of these learned but not numismatic controversialists.

I can only spare a moment to allude to events not directly connected with our society. The somewhat improved

British silver issue of 1927 continues to come forth from the Mint, but the faulty half-crowns and smaller pieces of the coinage of 1922-5 are allowed to circulate, and show more and more patches of red or yellow on the royal bust, as base metal works out. No attempt is being made to withdraw them from circulation, nor will the Chancellor of the Exchequer listen to my plea for the restoration of the old standard of purity, now that silver has fallen to 17 pence an ounce. Obviously the expense of minting pure silver shillings would *now* be no more than that of minting half-and-half alloyed shillings was in 1922, when silver was at four times its present market value.

There have been some important coin-books issued in the past year; I need only mention Dr. Hill's immense and splendidly illustrated Corpus of Italian Renaissance Medals, Mr. Grose's third and last volume of the catalogue of the McLean Collection, now safely housed in the Fitzwilliam Museum, Cambridge, and Mr. Forrer's concluding volume of the Hermann Weber Collections. All three of these volumes have a glorious sequence of photographic plates, showing every piece of any note that is mentioned in the text, and will be invaluable as books of reference, though their prices place them out of the reach of the private collector of modest means.

The Society has during the past year held its normal nine meetings. One of them, that of February, was an "exhibition meeting" of the sort which has proved popular in recent years, at which Fellows have the opportunity of exhibiting to each other their more important recent acquisitions, at more leisure than is possible at an ordinary meeting, when a paper is to be read, which restricts the time available for the study of individual coins. I was not able to be present at this February meeting, owing to a "Three Line Whip" from Westminster, but understand that it was quite up to the level of its predecessors. Mr. Gilbert, as I hear, was once more a benefactor by showing another lot of his admirable Roman Imperial *auri*.

Of the meetings devoted to the reading of papers, no less

than five were occupied by discussions on Roman history, or of history closely connected with the Romans. For I reckon that both the notes given by Messrs. Mattingly and Robinson on coin-problems of the Hannibalic Age in October, and also Mrs. Wheeler's account of the extraordinary Lydney find of debased *minimi* of the sixth century A. D., which intrigued us in May, must be counted as bearing on Roman topics, even if the coins described in each case did not come from Roman mints. It is noteworthy to see that the tendency of the working members of the society—if so I may call them—has been devoted to Roman topics in a fashion quite out of proportion to that of former years, when Greek studies were in the preponderance. Not a single one of our papers this year was on a Greek subject, and only two—those of Major Carlyon-Britton and Mr. Brooke—had reference to the English coinage. This tendency Romeward is only partially corrected by the contributions to the *Numismatic Chronicle* during the year, for if we have therein a paper on Sinope by Mr. Robinson and another by Mr. Wade-Gery on Greek fifth-century ratios between gold and silver, these are much exceeded in bulk by the immense contribution of our Honorary Fellow Professor Andreas Alföldi on the much neglected billon coinage of the Emperor Gallienus.

Incidentally I must remark that the good old *Chronicle* is keeping up its time-honoured reputation for unpunctuality in appearance. I am writing this annual report on June 15th, 1930—not one of the *Chronicle* numbers for 1930 has yet reached my hands, or those of other members of the Society—yet half the year is spent. I cannot help connecting the irregular appearance of the numbers of our journal with the slow adherence of recruits to the Society. To those not resident in London the *Chronicle* is the only return for their subscription which comes to hand, and I am bound to think that a more regular delivery of our esteemed and invaluable publication would have a stimulating effect on membership. I do not ignore the difficulties of editorship, or the perverseness of learned contributors, but I am

inclined to think that it would be better to publish papers already in hand at fixed dates, rather than to wait for interminable periods for articles avoidably (or unavoidably) delayed in preparation, even if the said articles are by the most eminent specialists.

But this is divagation—I must return to my notes on the papers which have been read to the Society between October 1929 and June 1930. None, as I have already mentioned, was on a Greek subject—but Roman topics engrossed our attention on many occasions. Undoubtedly the most interesting was Sir Arthur Evans's detailed account of all that has been discovered concerning the great Arras find of Roman gold medallions made in September 1922. The most important pieces are known to most collectors, either by means of electrotypes or at least by photographic plates, but I do not think that the astounding character of the hoard had been realized by any one till Sir Arthur gave us his paper. The number of pieces discovered was infinitely greater than we had suspected, and the fate of many of them was deplorable. Large and beautiful as is the famous medallion with Constantius Chlorus making his triumphal entry into London, there were apparently much bigger pieces in the find. Two enormous medals, weighing between them over a kilogramme (more than two pounds *avoirdupois*!) were privately sold by one of the finders to a goldsmith in Ghent, who melted them down! One is said to have represented an emperor in a chariot, the other a battle scene—presumably (as Sir Arthur Evans remarked) one of those types where a victorious emperor rides down on a group of vanquished enemies. In a coin weighing a pound *avoirdupois*, this would have given space for a very large and complicated set of figures. Was Constantius or one of his colleagues dealing with Germans, Sarmatians, or the semi-barbarous army of Allectus? Anyhow the subject would have been of supreme interest. It is maddening to hear that the Ghent goldsmith showed these medallions to a local expert, who said that they were far too large to be genuine, and advised their conversion into bullion in the

melting-pot. Apparently this unhappy adviser was quite well acquainted with the look of normal *aurei*, but thought that these vast medallions were far too good to be true. Meanwhile specimens from the find have been percolating through the hands of many Continental dealers, and some have found their way into the British Museum, and the cabinets of private English and American collectors. The all-important piece with the entry of Constantius into London was separated from the bulk of the hoard by the conscientious honesty of one of the finders, into whose share it had come. He reported it to the proper authorities, and it passed into the Arras Museum, where it has been scheduled as a "historic monument", and is there immobilized. But for the virtue of the finder, it might have been melted—or again it might have been sold around among dealers, and have found its way to Dr. Hill's Department. The British Museum would obviously have been forced to buy it at any cost, if it had come into the market.

Another find which came to our knowledge by Mrs. Wheeler's paper, read to the Society in May, was of a different character from the Arras hoard as can be imagined. It consisted of 1,200 bronze *minimi* from the ruins of the Roman temple buildings at Lydney on the Severn. Its details raise questions almost as interesting as those of the Arras find, but instead of being composed of large gold coins, it consisted of very minute and base bronze. The whole 1,200 coins would go into a tea-cup. Some were of the size of the smallest bronze of the time of Honorius and Arcadius, but others infinitely smaller, going down to less than a grain in weight. Those which had intelligible devices upon them appeared to be rude copies of Roman fourth century small bronze, largely of the "vanquished barbarian horseman" type, which was so common in the times of Constantius II and his colleagues. They did not, for the most part, reproduce scraps of the types usual in the orthodox coinage of the end of the fourth century, but rather those of its middle years. Many of them have a suggestive, but perhaps deceptive, likeness to the earliest

Anglo-Saxon sceattas—as if both classes were degradations of a common Roman original. But a good many had no perceptible devices on them at all. The date of these queer little coins gave rise to much discussion at our meeting. The general opinion, to which Mrs. Wheeler assented, was that they must have been struck a good many years after the final break between Britain and the Empire in 410. They may be late fifth century or even early sixth-century currency, for a good many years must have elapsed after 410 before the types could have been worn down to such degraded unintelligibility. The *terminus ad quem* would seem to be A.D. 577, the date at which the West Saxons under Ceawlin overran the Severn country. Down to that year there would seem to have been a British kingdom surviving in the Gloucestershire region—as Ceawlin is recorded to have taken the British cities of Gloucester, Bath, and Cirencester. Presumably these *minimi* may have been the medium of exchange in that part of the world before the final Saxon conquest.

Another most suggestive paper was that read by our medallist Mr. Sydenham on the extraordinarily profuse coinage of the Roman mint-master L. Calpurnius Piso, which the author ascribed, for good reasons, to the first year of the Social or Marsic War—B.C. 90. This series, as all collectors of the Republican coinage know, is distinguished by its immense variety of symbols or mint-marks, showing an exceptionally large emission, which would be accounted for by the need for raising and paying the very large armies that were required to deal with the widespread Italian revolt. Most of the denarii would seem to have been struck outside Rome, in extemporized mints. Corroboration for Mr. Sydenham's thesis comes from the E.L.P. (*e lege Papiria*) found on some of Piso's sestertii—the Papirian law having been passed precisely in 90 B.C.

Mr. Mattingly and Mr. Robinson co-operated in two notes on coinage during the Second Punic War. It was suggested that the silver struck in Spain during that struggle, with heads which look like portraits, may preserve the features

first of the great Barcide generals, Hamilcar and Hannibal, and afterwards that of the elder Scipio Africanus, who after conquering Spain from the Carthaginians may have continued their coinage, with a substitution of his own portrait on the obverse. This same head appears on bronze coins of Canusium, with which Scipio had a personal connexion.

My own contribution of last year consisted in some comment on a unique second brass of Caracalla in the Paris Cabinet, which appears to commemorate an episode of the campaigns of Severus in Britain. It represents two emperors, followed by an army with standards, crossing a bridge of boats over a broad expanse of water. Below is the inscription **TREIECTVS**. As the coin is dated **TR.POT XII** of Caracalla, i. e. in the year A. D. 210-11, it must represent the passage of some river or estuary by that emperor and his father, which was accomplished on a boat-bridge worthy of commemoration. As recent excavation has established the fact that the headquarters of Severus were near Cramond on the Firth of Forth, it seems a reasonable deduction to conclude that the Romans crossed the Firth at the first point where it is bridgeable with care and military convenience—probably, therefore, somewhere near Alloa. The site of the present Forth railway bridge seems less likely, owing to the much greater breadth of the estuary at that point. The meaning of this coin had been misinterpreted hitherto, owing to the date **XII** being misread **VII**—in which year of his tribunitial power Caracalla was very young, and not in Britain.

At the meetings of the past year two contributions on English coinage were read. The earlier was a paper by Major Carlyon-Britton on the rare pennies of Beorhtric, ascribed in the British Museum Catalogue of Anglo-Saxon coins to a hypothetical Beorhtric of East Anglia, whose name does not appear in any historical records. The reason for this attribution was a large **A** on the obverse, which was supposed to mean **ANGLORVM** both on this coin and on those of St. Edmund and other East Anglian kings. Major Carlyon-Britton demonstrates, in quite convincing fashion,

that this A is only part of the well-known A- ω , Alpha and Omega, a religious type found on coins of Mercia and Wessex, no less than on those of East Anglia. Indeed, on the particular coin which he illustrated, both A and ω are very clear. This being so, there is no need to create a Beorhtric of East Anglia, and these rare coins may be given to a perfectly concrete person, Beorhtric of Wessex, the son-in-law and contemporary of the great Offa—who was poisoned by misadventure through the wiles of his wife Eadburh. This re-attribution enables us to start the West Saxon currency a generation before it was hitherto believed to begin—Egbert having been always taken as the first coiner. This is very much what might have been expected from historical probabilities. The whole of the non-Mercian coinage of the early ninth century may have to be rearranged ere long.

The other paper on English coinage read to us this year was by Mr. Brooke, and dealt with the dating of the various issues of Henry V. The author demonstrated that the privy marks by which the coins of one year could, for official purposes, be differentiated from those of another, were worked on a principle which had been in use as early as the time of Edward III. He showed that the "privy marks" were minute differences in the shapes of the letters of the obverse and reverse inscriptions, in some cases similar to the mutilated letters to which Mr. Lawrence had drawn attention on coins of Edward III. These differences were made by slight mutilations in H, R, or P, or by variety in the size of Q and E or in the form of I or R. Such trifles, which would look like mere faults of the die to a forger, would not be copied by him. But to the official eye they revealed the quarter of the year in which a coin was struck, and showed that the master personally was responsible for any individual coin. Mr. Brooke found much help from the recent Horsted Keynes gold find, of which a notable part consisted of nobles of Henry V. All manner of "mules" and combinations of privy marks may be discerned. It was not apparently till the reign was

some years old that something more like mint-marks in the later sense, such as the well-known mullet, the annulet, and the trefoil in varied combination supplied the marks. The so-called "Emaciated Bust" coins seem to be the first issue of Henry V.

So much for the papers read to us—most of them were followed by very satisfactory discussion by the members present. Passing on to the contributions not read, but printed in the pages of the *Chronicle*, which have reached us during the last nine months, I am glad to have at last to mention Greek items. The Keeper of the Coin Room has sent us his usual annual report on new or important pieces added to the British Museum Cabinet during the last twelvemonth—interesting always, though not perhaps so numerous as in some past years. I noted a coin of Metapontum of the "Leucippus" type with a beardless instead of a bearded head, and an early Ionic electron stater with two confronted lions, which seems new.

Mr. Robinson gives us a paper on the coins of Sinope, mostly concerned with a hoard which has recently come into the possession of the Museum, mixed with a few coins of the much rarer mint of Trapezus. The interest of the hoard, which was for the most part in very good condition, lay in suggesting that the mint of Sinope was very active during the period when the city was defending itself for some years against the Satrap Datames, who finally captured it about the year 370 B.C. There were no coins forthcoming of the series which the satrap struck with his own name, after his victory, so the deposit was probably buried just before the year in which Sinope lost its independence.

The question of the relation of gold to silver during various periods of Greek history has been much discussed. Apparently it moved about at different epochs in the most perplexing way, according as Oriental gold was or was not circulating around the Aegean. To fix the ratio for one period Mr. Wade-Gery gives a contribution dealing with an inscription of the Athenian treasury, apparently belonging

to some date very early in the Peloponnesian War, if the name of Pericles is to be reconstructed in the broken lines of the record. The contributions in gold, some in Lampsacene and other staters and hektai, some in pure bar gold, are evaluated into Athenian drachmai, as the currency in which the account had to be presented. Apparently bar-gold from Thasos was taken at the very low rate of ten to one, but there is another entry where a transaction at the rate of eleven to one seems to be demonstrated. Several sorts of gold and electrum staters are tarified—the big Cyzicene piece seems to have been reckoned at twenty-four Attic standard silver drachmai, the daric apparently (also called a “stater”) at a slightly higher rate. But the inscription is, unfortunately, so fragmentary that the resulting conclusions, always ingenious, are not always quite certain.

For Roman numismatics we have an immense, controversial, and very interesting paper by our new Honorary Fellow Professor Andreas Alföldi, dealing with a rather neglected corner of Imperial history, the victories of Gallienus in the earlier years of his reign, which he very carefully recorded at first as **VICTORIA GERMANICA** I, II, and III. Professor Alföldi thinks that with this series of “German Victory” coins must be compared the considerable outburst (mainly from the mint of Milan) of coins commemorating the “Piety” and “Fidelity” of the legions, some with the figure V appended, others with VI, a few with VII. The Professor thinks that the later victories of Gallienus must be those over the two successive Balkan Peninsula usurpers, Ingenuus and Regalianus, and then that over the two Macriani father and son, who came in from the East after Regalianus had been put down. The difficulty about connecting the legionary coins with these “victories” is that Pannonian and Moesian corps were concerned in the rebellion of Ingenuus, yet are commemorated as “faithful” after they had fought under his banner and had been defeated. The Professor will have it that this is mere propaganda, the slurring over of an unfortunate dereliction of duty, and a sort of promise that “bygones

may be by-gones". He allows that the whole legionary series must end when the Rhine Legions rebelled under Postumus in 260; for to have called them faithful once again would have been absurd. But is it really credible that the Pannonian rebel-legions under Ingenuus should ever have been given the "VI P. VI F" distinction after their original defection? We cannot think it possible. Into the question why the three British and one Spanish legions which belonged to Gallienus are never commemorated as "pious and faithful" Professor Alföldi does not go. Surely they had as good right to be praised as the Lower Rhine legions, which cannot have been concerned with the putting down of Ingenuus or Regalianus or the Macriani? It would be much preferable to screw the whole legionary series into the period before the original revolt of Ingenuus. The second part of Professor Alföldi's paper deals with the types of the two unfortunate elder sons of Gallienus, Valerian Junior and Saloninus, who died before their father, and is especially concerned with the curious IOVI CRESCENTI coins, with the child riding upon a goat. Apparently Gallienus had a propagandic vision of the return of the "Age of Gold", of which his unlucky offspring was to be the forerunner. References are made to earlier dreams of this sort, reminiscences of Asinius Pollio and Virgil. It cannot be denied that a study of the coinage of Gallienus makes us wish to know more of this inventor of so many and such odd coin-types. He was certainly no sluggard or *fainéant*, as is often alleged; and, fighting in hard times, made no mean defence. That he had ideas of his own is certainly shown by his curious project for founding a "city of philosophers" in Campania. Unfortunately to all numismatic students his name is mainly connected with the deplorable decay in the purity of the silver coinage—which he took over half-silver and left as copper rudely silver-washed.

Our Treasurer contributed to the *Chronicle* a note on an almost equally neglected period of the Roman coinage, the early years of the joint rule of Diocletian and Maximian,

before the "reformed" gold and the restored pure silver issues began. He showed which mints were open in 284-93, and which only came into existence after the reform. More especially he went into the very puzzling problem of the existence of three varying weights in the gold coinage during these ten years—one continuing the recent standard of Carus and Carinus, the others diverging from it. Obviously experimental changes were tried before the "reformed" coinage was stabilized. Their chronological arrangement is (as Mr. Webb shows) no less difficult than an explanation of their divergencies.

Of British articles, other than those already noted under the head of papers read at meetings, I have only to note Mr. Brooke's discussion on the Horsted Keynes find of nobles; but this, too, I have already had to notice, as forming a considerable part of the material of his read contribution on the history of the mint under Henry V.

Oriental numismatics do not form an entire blank in the pages of the *Chronicle* this year, as we were favoured by a communication by Professor Hodivala, a well-known Indian historian, on the Zodiacal rupees of the emperor Jahāngir, and their dates and mints. I wonder if the forthcoming Persian Exhibition at the Royal Academy, which is to take place this next winter, will inspire some member of the Society to give us a paper on Persian coins, especially those of the last now vanished dynasty of the Kājārs. There is some iconography to be studied among them—a thing all too rare in Mohammedan issues.

And now I must proceed to the part of my address which to some of you will seem the most necessary section—the explanation of how it comes that I shall not in October next be addressing you from the Presidential chair. The Council have been aware of the approaching change since May, but I think that to many Fellows my announcement will be a piece of news.

At the May meeting of the Council, as some of you at least are aware, I made the announcement that I was intending at our annual gathering to resign the position

of President of the Society, after having held it for ten years. This I do, not because my interest in the Society is in the least flagging, nor because I feel that either health or parliamentary duties form any impediment to my discharging the duties of President. Still less am I influenced by any theories as to a rapid succession of officers being in itself a good thing for any society. Indeed, I am of opinion that in the interest of any institution a well-known figure-head is far better for its prosperity than a frequently changing series of chiefs. I know of societies which have distinctly suffered in public estimation by the quick rotation of office-holders. When pushed to extremes it sometimes leads to criticism on the line of "*obscurum per obscuriorem*".

But there is a special reason why I should withdraw in 1930 from the Presidency of our Society, which for the last ten years has been a source of pride and pleasure to me, and I hope not detrimental to the general interests of numismatics. It is that we have, and have had for many years, an officer on our Council who has proved himself in every way worthy of the highest honour that the Society can confer upon him, as a testimonial not only of our gratitude for his long service, but as a tribute to his eminence as a researcher and as an author. Mr. Webb's name is known all round Europe in the circles where the Roman coinage is studied, and his contributions to numismatic literature are numerous and always valuable. We gave him the Society's medal as far back as 1921, and I do not know of any other form of distinction save the presidency by which we can express our appreciation of his outstanding merit. I may add that he is well skilled in the art of presiding at a meeting, and has frequently sat in the vice-presidential chair at our monthly gatherings, when my predecessor or myself were unable to be present. It is with perfect confidence in the excellence of his capacities for rule and administration that I make way for him, and give him the heartiest expression of my hopes that the honourable office to which the Council has elected

him may be a source of gratification to him personally, as it is to the whole of the members here present. May he and the Society go on "conquering and to conquer", in the never-ending endeavour to extend the bounds of numismatic knowledge. An admirable Treasurer will make an admirable President.

Lt.-Col. Morrieson proposed and Mr. Garside seconded a vote of thanks to Sir Charles Oman for his many services to the Society during his tenure of office as President.

The President then announced the result of the ballot for office-bearers for 1930-1 as follows :

President.

PERCY H. WEBB, Esq., M.B.E.

Vice-Presidents.

LIEUT.-COL. H. W. MORRIESON, F.S.A., F.R.S.A.

PROFESSOR SIR CHARLES OMAN, K.B.E., M.P., M.A., D.C.L.,
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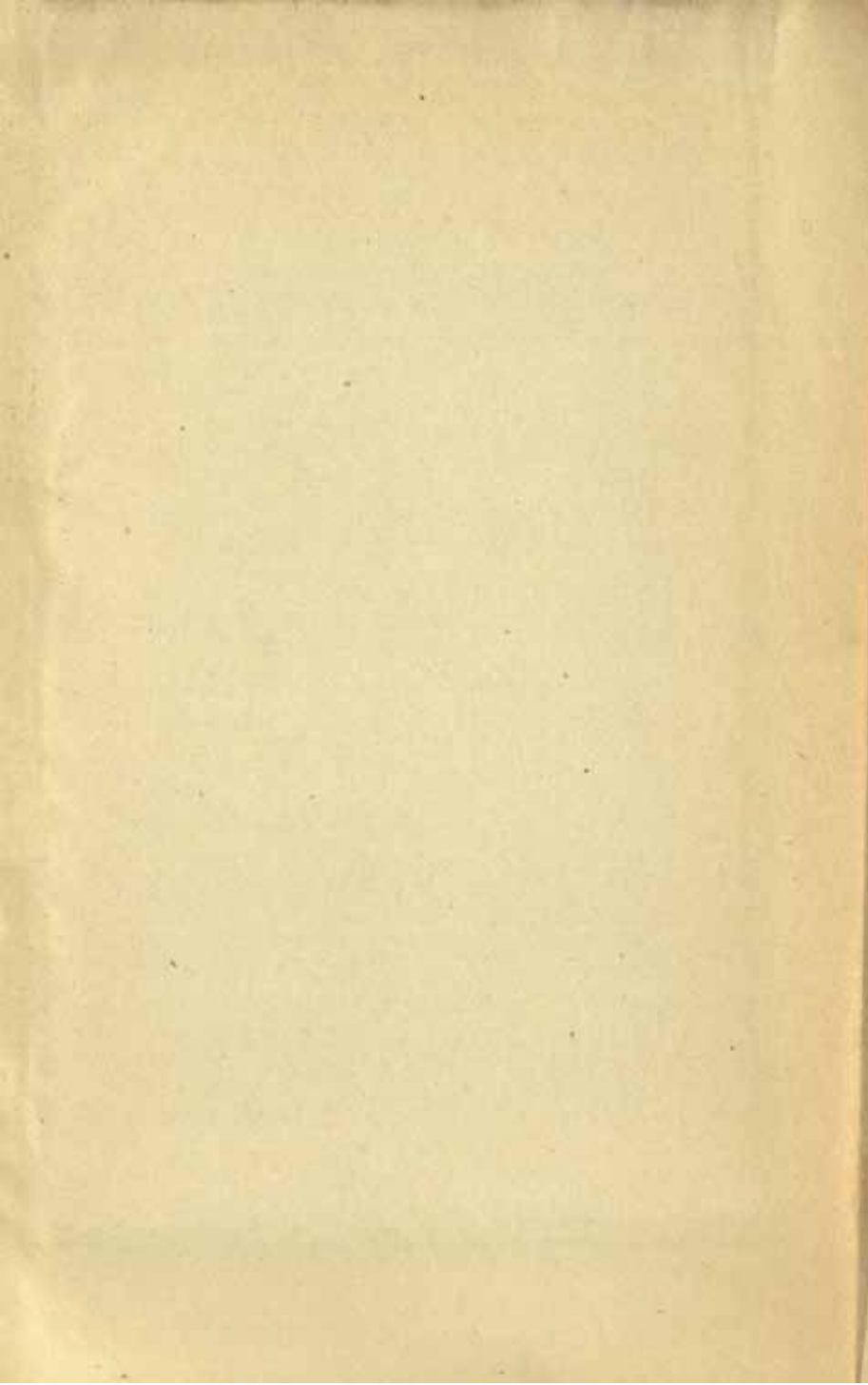
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F.B.A.

L. A. LAWRENCE, Esq., F.S.A.

HAROLD MATTINGLY, Esq., M.A.

C. C. OMAN, Esq., M.A.

The President having proposed a vote of thanks to the Auditors and Scrutineers adjourned the Society till October 16.



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